Fine Binding

Vol. 37 Toronto, July 1, 1917 No. 13

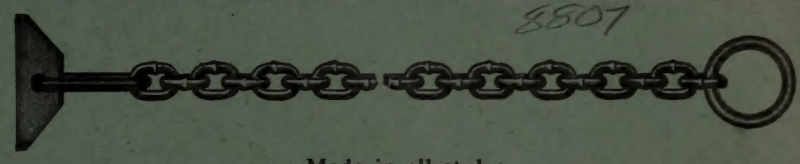
Canada Lumberman & Wood Worker

DEFEAT

your Pipe Coupling Troubles by using Dart Unions.

They NEVER Leak.

your Jobber Sells Them



Made in all styles

Electric-Welded Boom Chain

We also specialize

Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.

YOU CAN SAVE 15 TO 50% POWER COST

in your exhaust systems for conveying and removing Shavings, Sawdust, Bark, etc., by using

"CANADIAN"

Slow Speed Mill Exhausters

Facts are facts. Ask the users—and there are hundreds of them—what they think of the investment. Then you will use a "Canadian" on your next job.

Canadian Blower and Forge Co., Limited

KITCHENER, ONT.

St. John Montreal Toronto Winnipeg Vancouver

Blast wheel for stringy material.

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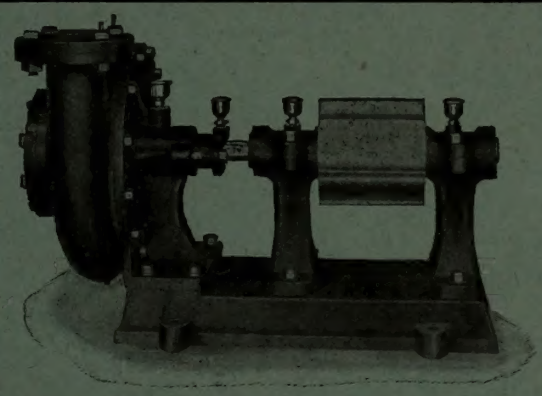
We manufacture practically every article that can be made of Asbestos—including

Asbestos { Packings, Boiler Gaskets, Pipe and Boiler Coverings

Atlas Asbestos Co., Limited, Montreal

(Formerly Turner Bros. Canada Limited)



PUMPS

Vertical
Horizontal

Steam
Power

The Smart-Turner Machine Co., Ltd., HAMILTON CANADA

J. M. T. Automatic Injector

Made in Canada

Made according to the most approved ideas with connections to suit any requirement. Injectors start from 2 to 3 lbs. of steam pressure when water is taken from a barrel or tank, at level of the Injector. With water pressure of 20 lbs. they start at from 10 to 12 lbs. of steam and work up to 175 lbs. Used for low pressure in steam heating plants.

We also make our J.M.T. Improved Injector for Working Pressures up to 220 lbs. Steam.

Send us your Injector enquiries.

The James Morrison Brass Mfg. Co., Limited

93-97 Adelaide Street West, TORONTO

Alphabetical Index to Advertisers, Page 54 Classified Directory to Advertisements, Page 60

Five Facts about Famous Five Files

They are made from high carbon steel.

The heat treatment for each file is scientifically determined.

The grinding is done by machinery, which insures a perfect surface for cutting.

The teeth are mathematically accurate, insuring a sharp, even cut.

They are recognized as standard tools by mechanics everywhere.

Be on the safe side and specify "Famous Five" Files when ordering.

Kearney & Foot
Great Western
American
Arcade
Globe

Made in Canada by

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Standing Timber

in Large or Small Blocks

and

Sawmill Machinery

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Falconbridge and Street for small mills.

We have the following Sawmill Machinery For Sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.
1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.
1 Double cylinder steam nigger, right hand.
1 Log Loader for right hand mill.
1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.
1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.
1 left-hand steam nigger.
1 Log-loader.
1 Endless chain jack ladder with two kickers complete for right and left hand mills.
2 Roger Gang Edgers for 8-in. cants and lumber.
1 Waterous double edger, 6 saws.
1 2-saw Trimmer.
1 20-ft. Slash Table.
1 16-ft. Revolving Slash Table
1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.
1 Lath Mill with bolter.
2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.
1 Hand Machine for cut-off saws.

POWER PLANT

1 Double Duplex, high pressure Water Pump.
5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.
2 125 h.p. Water Wheels.
1 Upright Engine for sawdust conveyor.
1 10 h.p. Engine.
1 Wood Machine for 22-in. wood.
1 Edger for ripping dry lumber, installed.
1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co. Limited

26 Ernest Ave.

Toronto, Canada

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1916 SAWING—DRY STOCK

Merchantable			5th Quality		
2 x 4 x 10/16	-	50,000'	3 x 5 and up x 6/16'	-	160,000'
2 x 5 and 6 x 10/16		60,000'			
2 x 7 x 10/16	-	100,000'			

1917 SAWING

Merchantable

1 x 3 x 10/16	2 x 4 x 8/16	3 x 6 x 10/16
1 x 4 "	2 x 5 "	3 x 7 "
1 x 5 "	2 x 6 "	3 x 8 "
1 x 6 "	2 x 7 "	3 x 9 "
1 x 7 and up	2 x 8 "	3 x 10 "
	2 x 9 and up	3 x 11 "

Mill Culls

1 x 3 and up x 6/16	2 x 4 and up x 6/16	3 x 6 and up x 6/16

Merchantable Spruce Lath 1½ x 4'

Bartram & Ball Limited

WHOLESALE LUMBER

Drummond Bldg. - Montreal, Que.

B.C. Fir Lumber and Timbers

Rough or Dressed

We have Timbers and Dressed Lumber always in transit.

Wire us your enquiries.

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B. C. Fir Flooring
B. C. Fir Ceiling
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SPECIALISTS IN BRITISH COLUMBIA FOREST PRODUCTS

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CHEMAINUS TIMBERS

Victoria Lumber & Mfg. Co., Ltd.

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CHEMAINUS, B. C.

Sales Office for Eastern Canada

Traders Bank Bldg.,

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R. G. CHESBRO, Rep.

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

LOOK—

for immediate shipment from our siding in Hamilton.

CAN LOAD MIXED CARS

NORWAY PINE

1 car 2 x10—20.
1 car 2 x 10—18.
2 cars 2 x 8—18.
1 car 2 x 8—20.
1 car 2 x 8—16.
1 car 2 x 8—12 and 14.
12,000 ft. 2 x 6—20.
10,000 ft. 2 x 6—18.
30,000 ft. 2 x 6—16.
1 car 2 x 5—10 to 16.

WHITE PINE

1 car 4 x 6 and wider.
1 car 6 x 6 and up.
1 car 3 x 6 and up.
1 car 6/4 Pattern Stock.
1 car 1 x 4 and up No. 2 Pine Culls.

YELLOW PINE

60,000 ft. 3 x 6—10.
1 car 3 x 6—14.

SPRUCE

1 car 3 x 6—10 to 16.
1 car 2 x 4—10 to 16.
1 car 4 x 4—10 to 16.
1 car 3 x 4—10 to 16.
1 car 2 x 4 and up No. 2 Spruce.

The Long Lumber Company

Hamilton, Ont.

Rubber Goods FOR LUMBERMEN

Belting Our long experience in the making of Rubber Belts enables us to specialize on this line. "P.M.S.," "Special Drive" and "Lion" are our leading brands for power transmission.

Packings "Redstone" High Pressure Sheet Packing has proved by test that it will outlast any other similar packing on the market. We make Spiral and Ring Packings, etc., that are equally reliable.

Hose for Steam, Water, etc., in various grades, made especially to give satisfactory and economical service under different conditions.

Fire Hose One or more of our twenty brands of Fire Hose will be found, not only in the best equipped Factories, Mills, etc., but in almost every Fire Department in the Dominion.

Gutta Percha & Rubber, Limited

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George Gordon & Co.

Limited

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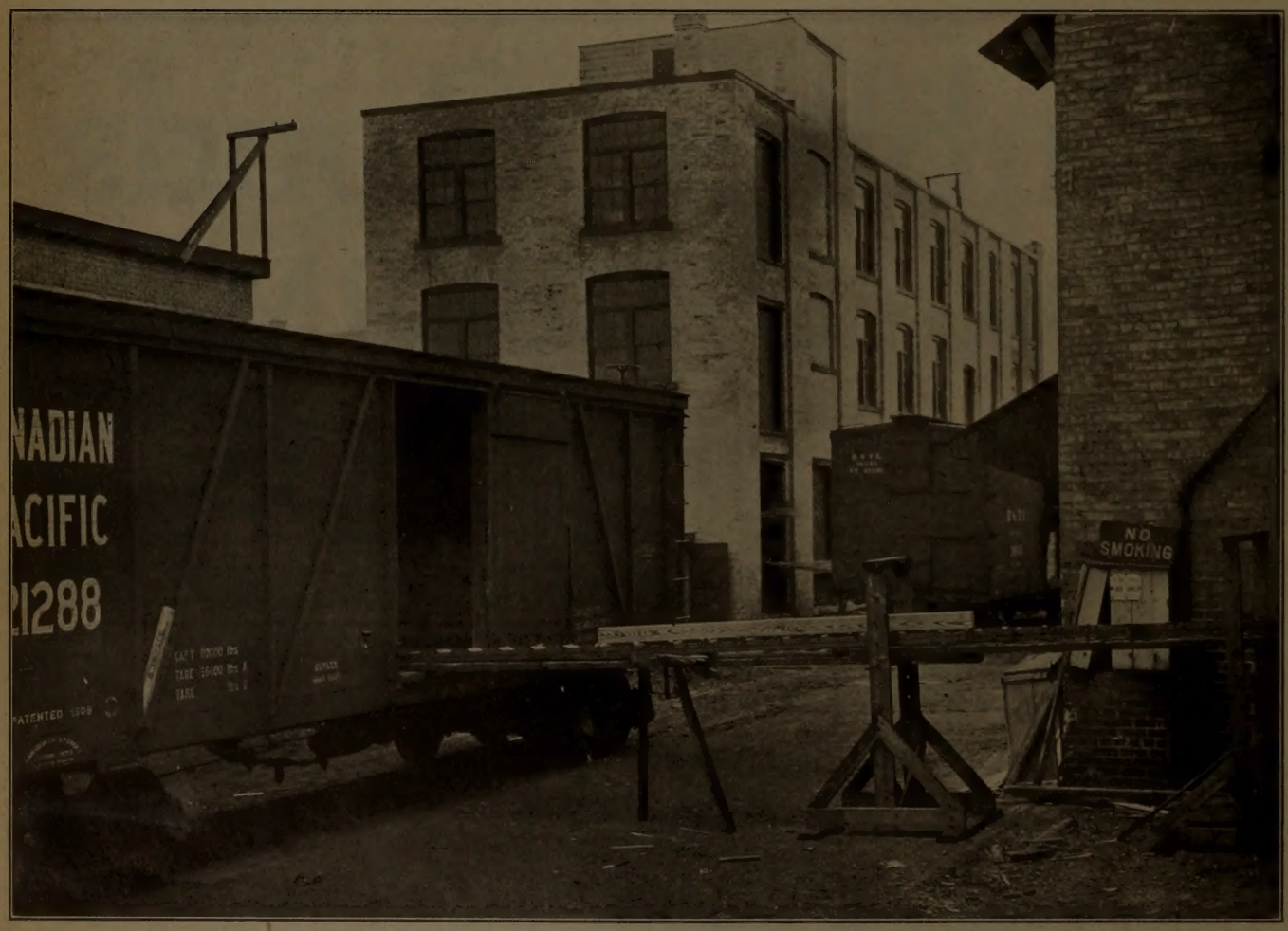
Manufacturers of

RED and WHITE PINE

PLANING MILL **DRY KILN**



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As a first step, write for our literature on Handling Lumber

Cut shows our lumber conveyor in use at R. Laidlaw & Co., west end plant

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Wholesale Lumber Dealers and Selling Agents for

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DESCHENES - - - QUEBEC

White Pine
Red Pine
Spruce
Lumber and Lath

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The fact that our stocks are complete and well assorted assures you of **Satisfactory Service, Good Grades** and **Right Prices.** We want your inquiries and orders when in the market for

Railway Ties and Pulpwood
Rough and Dressed Lumber and Lath

We specialize on cutting to order all sizes of

Dimension Timber

Also in Dressing in car or mixed lots 1", 2" and 3" to customers' specifications.

Complete stocks always ready for prompt shipment.

We are the Largest Producers of Railway Ties in the Dominion

Austin & Nicholson

Chapleau, Ontario

Long Leaf Yellow Pine, Louisiana Red Cypress

Annual Capacity 350,000,000 Feet Yellow Pine
50,000,000 Feet Red Cypress

Nature's best in forest products

LET US QUOTE YOU PRICES

Up-to-date mills and unsurpassed ***SERVICE.***

We are ***prepared*** to fill orders—try us.

CHICAGO LUMBER & COAL COMPANY

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General Offices: EAST ST. LOUIS, ILLS.

California White Pine
California Sugar Pine
and Arizona Soft Pine

Best Stock for Factory and Pattern Lumber

Ask **LOUIS WUICHET**

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BASS WOOD

We offer for immediate shipment—
1" and 1½" Dry Basswood

DRY BIRCH STOCK

We offer in Birch End Stock—
1 x 8½" 1 x 9" and wider
1 x 6 and 7" 1½" to 4"

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ASH HEMLOCK and PINE

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SPECIAL—

100/125 M. Ft. Dry Norway Culls

3 x 4"/up 6/22 ft.

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Ottawa - Canada

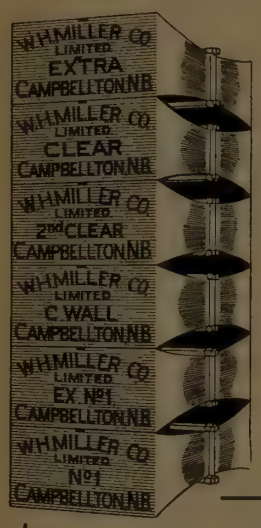
Lumber - Lath - Shingles

Cedar Poles and Posts

Railway Ties - - Piles

Let us quote on your requirements for

Spruce and Pine Lumber



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Shipments by rail and water

Prompt--reliable--carefully handled

We Specialize in
New Brunswick White Cedar Shingles
LET US QUOTE YOU

W. H. Miller Co., Limited
Campbellton, N.B.

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The
Largest Eastern Warehouse
of British Columbia Products

I can supply at short notice mixed carloads of

Fir Doors, Columns, Mouldings, Red Cedar Clapboards and Shingles, Fir V-Joint Sheeting, Flooring

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— SPECIALTIES —

TIMBER - DIMENSION - FINISH

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Milne, Hall & Johns Co., Inc.
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Manufacturers of
Hardwood Lumber

OAK WAGON STOCK
Our Specialty

750,000 ft. Thick Oak Plank in stock, 2 inch to 5 inch thickness. Quick shipment can be made.

Send us your requirements and we will quote delivered prices.

RIGHT GRADES
QUICK SHIPMENTS

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Ten Band Mills to Serve You

Mills and Railway Connections

Fredericton, N.B.	Railway connection	C. P. R.
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Baker Brook, N.B.	" "	Temiscouata Ry. and N.T.R.
Glendyne, Que.	" "	N. T. R.
Escourt, Que.	" "	N. T. R.
Cabano, Que.	" "	Temiscouata Ry.
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ROUGH AND DRESSED SPRUCE, WHITE CEDAR SHINGLES, SPRUCE LATH, PIANO SOUNDING BOARD STOCK.

THE TIME OF HARVEST

IF you would reap the benefit of our large, carefully-selected and well-manufactured stocks of

SPRUCE and PINE LUMBER

and

BEAVER BRAND WHITE CEDAR SHINGLES

Write for our monthly stock and price list.

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Manufacturers of

SPRUCE, HEMLOCK TIMBERS AND PILING AND LATH

Prices promptly given on all enquiries.

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30,000 ft. 1 x 4 and up No. 2 Spruce, D1S.
60,000 ft. 5/4 x 4 and up Crating Spruce
50,000 ft. 1 x 3 and up Crating Spruce
50,000 ft. 1 x 3 Crating Spruce
200,000 ft. 1 x 4 No. 2 Jack Pine.
500,000 ft. 1 x 5 and up No. 2 Jack Pine.
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100,000 ft. 1 x 12 No. 1 Mill Cull White Pine.

Also Hemlock and Pine.

JAMES R. SUMMERS
Wholesale Lumber Merchant,
95 King St. East — TORONTO

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We are Buyers of ALL GRADES
WHITE PINE, SPRUCE and HEMLOCK LATH
Will contract for entire output and pay spot cash
Send full particulars as to grade, quantity and prices

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SPECIALTIES

Sawed Hemlock
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White Pine Lath
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James Gillespie

Pine and Hardwood

Lumber

Lath and Shingles

North Tonawanda, N.Y.

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When in the market for

White or Red Pine

or for

Ontario Hardwoods

Let Us Quote You

SPECIAL !

200 M' Good Cedar Squares

8 x 8—10/16
8 x 10— "
10 x 10— "
10 x 12— "

We are ready to contract for Output of Mills in any Ontario Soft or Hardwoods. Highest cash prices paid, and would advance money for operations.

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Manufacturers and Strictly Wholesale Dealers in Lumber

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Hickory Handles

Made from the best imported
HICKORY
Quality, Shape and Finish Unexcelled
Write for latest prices and get in on the ground floor.

St. Mary's Wood Specialty Co., Limited
St. Mary's - Ont.

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LUMBER AND TIMBER
White Pine, Norway, Yellow Pine, Hemlock
Oak Mouldings, Doors, Sashes and Blinds, Cedar Poles and Ties.
Yellow Pine Timber a Specialty.
Interior Trim Mill Work
NIAGARA FALLS, N.Y.

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Eastern and Southern Lumber

We are at all times in the market for dry
WHITE PINE, DIMENSION SPRUCE, SPRUCE BOARDS, HEMLOCK BOARDS, LATH and CLAPBOARDS.
Advise us of your Market Prices and Stocks

A. H. Richardson Lumber Co.
176 Federal Street, BOSTON, MASS.

Tea that is all genuine leaf and produces the greatest quantity of flavoury satisfying infusion

"SALADA"

Send for samples and prices.
SALADA TEA CO. — TORONTO

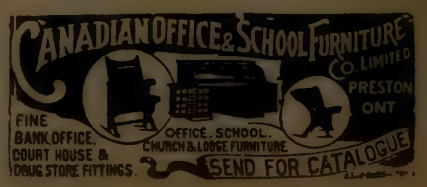
DR. BELL'S
Veterinary Wonder Remedies

10,000 one dollar ($1.00) bottles Free to horsemen who give the Wonder a fair trial. Guaranteed for Colic, Inflammation of the Lungs, Bowels, Kidneys, Fevers, Distemper, etc. Send 25c for Mailing Package, etc. Agents wanted. Write your address plainly. DR. BELL, V.S., Kingston, Ont.

BUNDLING WIRE
For Hardwood Flooring

Tie it with wire. The contractors like it because the bundles never break in handling. Write for quotations.

LAIDLAW BALE-TIE CO., Ltd.
HAMILTON, ONT.



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Exact knowledge of where your lumber is and how much it runs to the acre in every spot. Our Density Plans show it. Operators are enthusiastic about them. Write for a sample.

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OLD TOWN, - MAINE

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VENEER
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Special machinery made to order

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Appraisal of timber lands, timber maps, logging efficiency reports, planting. Maximum of accuracy in minimum time and at minimum expense.

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Staves Hoops
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"Well Bought is Half Sold"

We Offer
the following lots of
Dry White Pine

5 Cars 1 x 4/7 in.—12/16 ft. D. Sels. and Btr.
4 " 1 x 12 in.—12/16 ft. Common.
1 " 5/4 x 8/up—12/16 ft. D. Sels. and Btr.
5 " 6/4 x 7/up—12/16 ft. Canada Dressing and Btr.
(This item very suitable for Door trade)

2 Cars 2 x 8/up—12/16 ft. Canada Dressing and Btr.
2 " 2 x 9—12/16 ft. Canada Dressing and Btr.
2 " 2 x 4/7—12/16 ft. Canada Dress. and Btr.
4 " 2 x 8/up—12/16 ft. Common.
4 " 2 x 4/7—12/16 ft. Common.
10 " 2 x 4/up—6/16 ft. No. 2 Culls.
10 " 3 x 7/up—6/16ft. No. 2 Culls.

Also

5 Cars 4/4 dry No. 2 Com. and Btr. Black Ash.

Also these few items in Dry Lath

3 Cars 3/8 x 1½—32 in. M.R. White Pine.
1 Car 3/8 x 1½—36 in. M.R. White Pine.
5 Cars 3/8 x 1½—4 ft. No. 1 White Pine.

We shall be glad to quote you on the above

Graves, Bigwood & Co.

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Pine
Hemlock
Hardwood } **LUMBER**

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Mills: Byng Inlet, Ont.

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MONTHLY LIST
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NEW and USED
WOOD TOOLS
for Immediate Delivery

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42" Fay & Egan power feed.
32" Crescent pedestal.
28" Ballantine, bracket.
26" Crescent pedestal.
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No. 1 Crescent.
No. 3 Crescent universal cut-off gauge.
No. 5 Crescent, sliding top.
Ballantine variable power feed.
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12" Defiance automatic cut-off.
MacGregor Gourlay power feed cut-off
Champion combination wood top.
Canadian steel frame pole saw.
Ideal variety.
7½' iron frame swing.
6½' Williams wood frame swing.
5½' Crescent swing.

Planers
30" Whitney pattern single surfacer.
24" various makes single surfacers.
24" Galt, revolving bed.
16" Canada Mach. Corp. pony planer.
12" Fisher buzz.

Sanders
24" Fay double drum.
18" Crescent disk and drum.
8" Wood frame belt sanders.

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13" Clark-Demill four side.
12" Cowan four side.
10" Houston four side.
6" Cowan four side.
6" Dundas sash sticker.
5" wood frame sash sticker.

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M190 Cowan hollow chisel.
Galt upright, compound table.
No. 1 Smart foot power.
No. 2 Smart foot power.
No. 5 New Britain chain.

Clothespin Machinery
Humphrey No. 8 giant slab re-saw.
Humphrey gang slitter.
Humphrey cylinder cutting-off machine
Humphrey automatic lathes (6).
Humphrey double slotters (4).

Miscellaneous
MacGregor Gourlay 12 spindle dovetailer.
Fay & Egan 12 spindle dovetailer.
M80 Cowan dowel machine.
No. 1 Ballantine dowel machine.
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Cowan geared post boring machine.
New Britain drawer lock machine
M137 Cowan sash clamp.
Galt blind-stile borer and mortiser.
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Dundas double head tenon machine
3" Pringle & Brodie variety lathe.
16" Ideal wood lathes
No. 4A Fox wood trimmer.
20" American wood scraper.
Broom handle and rod machine.
4-head rounding machine.
M63 Cowan spindle carver.
15 Cowan veneer screw presses
Iron frame 3-block sawmill.
Dougherty horizontal shingle machine.
26" Dominion lath trimmer.
48" 3-saw edger.
No. 1 Hart automatic saw filer.
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Prices, Descriptions and full particulars on request.

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FIR TIMBER and Finish, CEDAR SHINGLES and Lumber

Sole Selling Agents for **The British Columbia Mills Timber and Trading Co.,** of Vancouver, B.C., for Fir Finish and Flooring for the Province of Quebec and the Maritime Provinces.

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Sole Selling Agents for Eastern Canada for WHEELER OSGOOD CO., Tacoma, Wash.—Doors, Turned Stock &c.

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All Grades in White Pine Lath A Specialty

Milling in Connection

E. J. MOORES, Jr.

MIDLAND CANADA

LET'S GET TOGETHER

JOHN DONOGH & CO.

Wholesale Lumber Dealers

Send in your enquiries.

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Heavy Timbers

We specialize in heavy timber. The accompanying cut shows our steam crane for loading and unloading. Let us figure on your requirements.

The Boake Mfg. Co. Limited

Toronto, Ont.

Established 1873

GILLIES BROS. Limited

Mills and Head Office
BRAESIDE, ONT.

Manufacturers of

WHITE PINE

RED PINE

SPRUCE

New York City: Guy E. Robinson, 1123 Broadway

Buyer Wanted

For 60,000 3 x 7/10″ — 10/16′ WHITE PINE SECONDS
" 40,000 3 x 6/10″ — " " " "
AIR SEASONED

Sample Specifications on Application

The Rideau Lumber Co, Limited, Ottawa, Ontario

ARKANSAS SOFT PINE

Makes

PERFECT WOODWORK

Under

WHITE ENAMEL or STAINS

Write { The Mills for Prices
The Bureau for Literature

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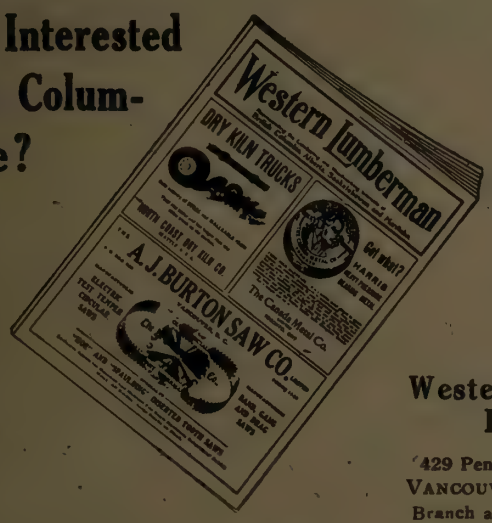

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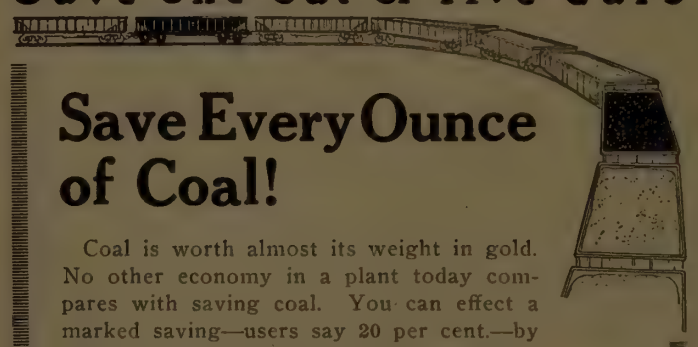

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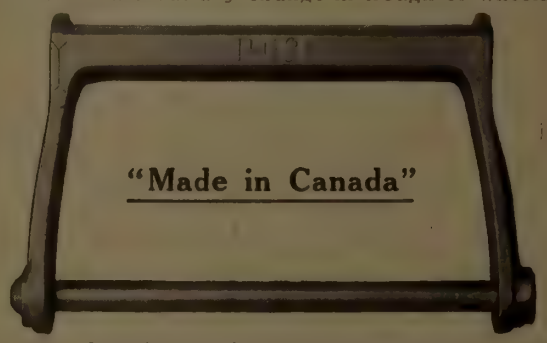

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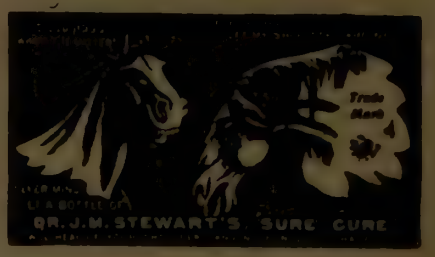

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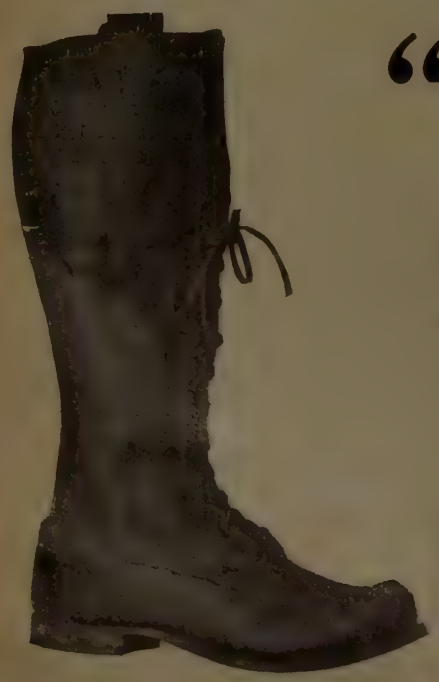

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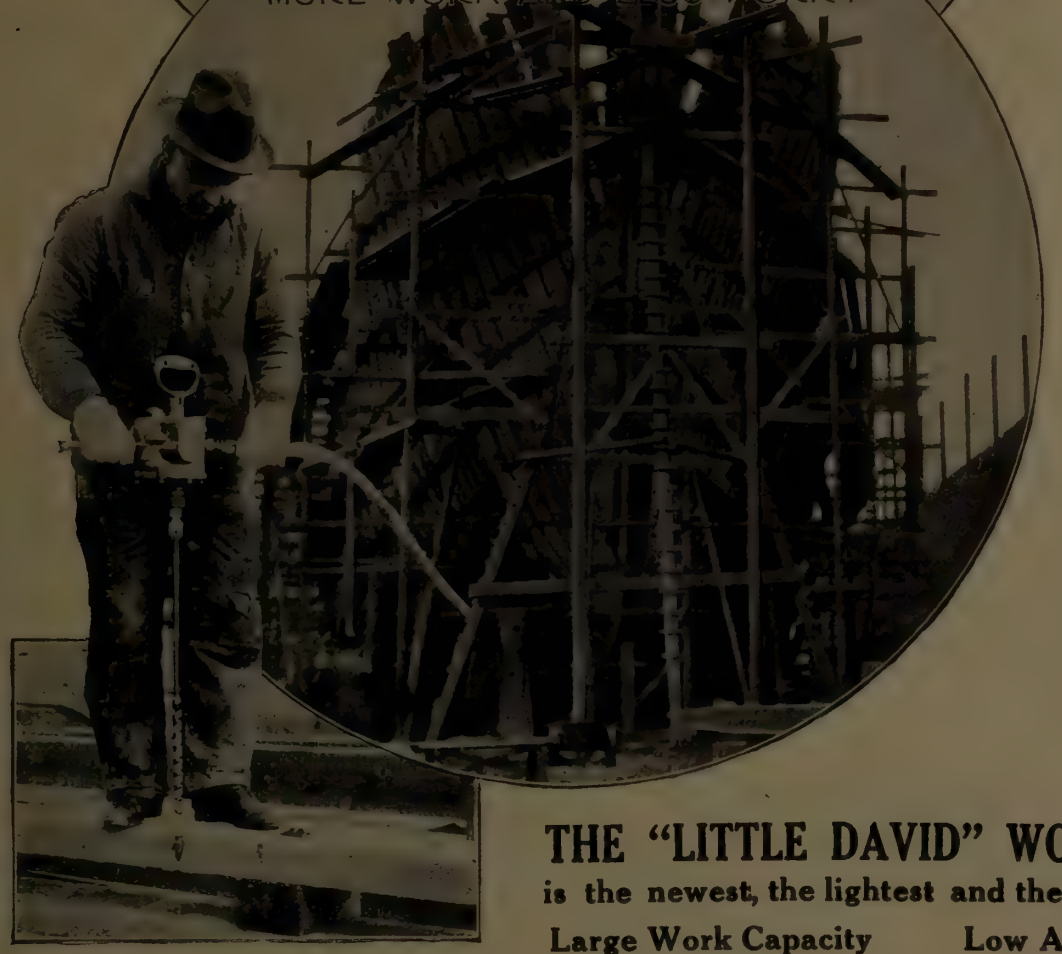

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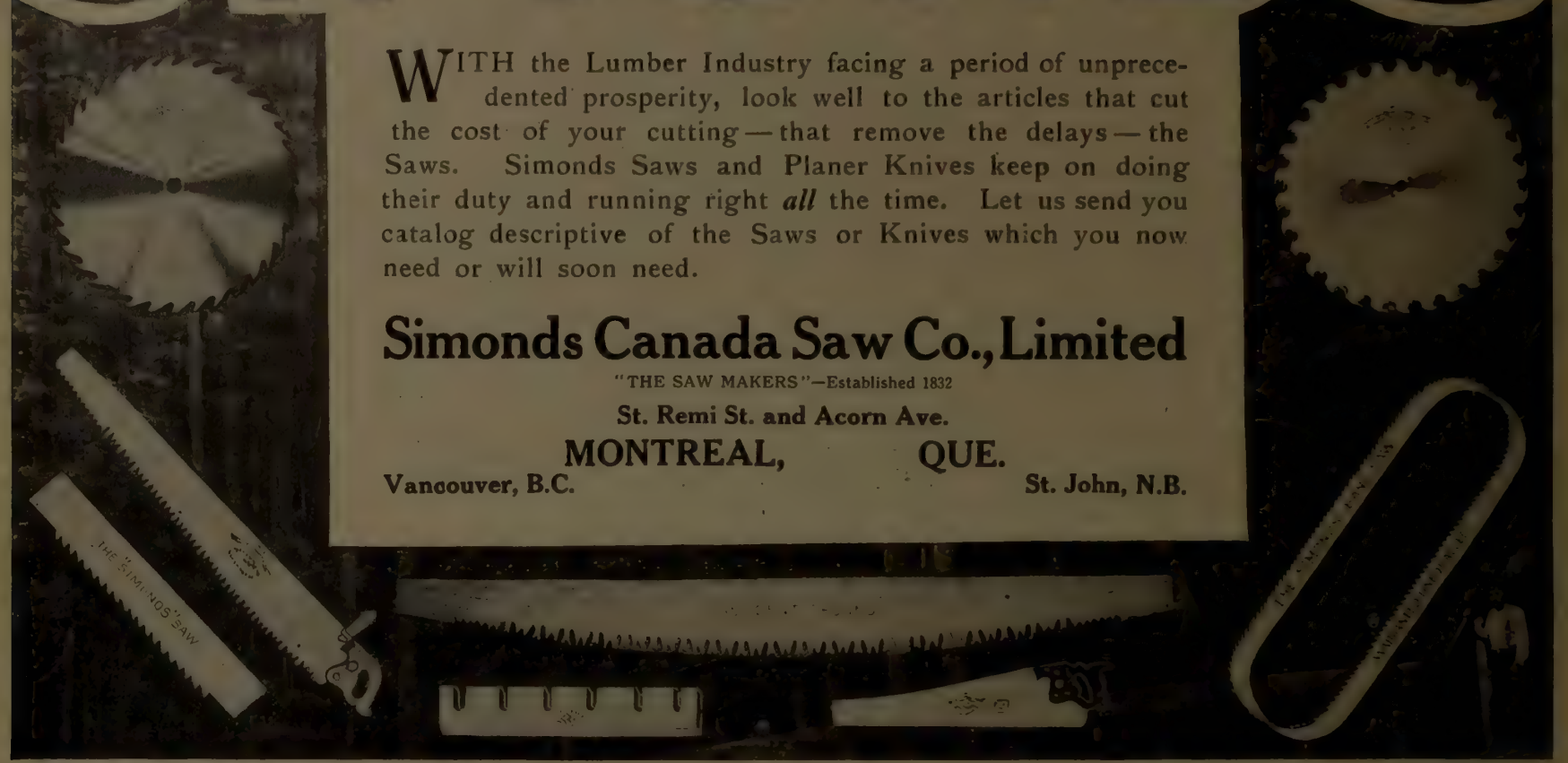

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TERMS OF SUBSCRIPTION

Canada, United States and Great Britain, $2.00 per year, in advance; other foreign countries embraced in the General Postal Union, $3.00.
Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster-General for Canada, for transmission as second-class matter.

Entered as second-class matter July 18th, 1914, at the Postoffice at Buffalo, N.Y., under the Act of Congress of March 3, 1879.

Vol. 37 **Toronto, July 1, 1917** **No. 13**

Railways Asking Too Much

Proposed railway freight tariff increases, and actual increases in the cost of shipping lumber resulting from advanced minimums and increased stop-over charges, have been coming thick and fast of late, and the question arises where they will stop, or how long the lumbermen will stand for it. Apparently the railway companies will keep it going just so long as they find they can get away with it. In the face of events that have been taking place in the railway world it is difficult to justify the increases that are being asked for, and so often permitted, by the Dominion Board of Railway Commissioners.

Take the matter in its widest possible bearing and it becomes evident that any increases permitted to the Grand Trunk and the Canadian Northern on the plea that they must have greater earnings in order to continue in operation will amount to a gift to the Canadian Pacific Railway, which must be granted the same permission to increase rates, even though it is already operating at a profit. The argument of the railways, whenever they seek to justify the increase, is that they need the mony, yet the Canadian Pacific Railway gets along well without it. The reason, therefore, must be sought elsewhere, and it is to be found in the unfortunate history of the railway companies which to-day are financially in such difficult straits.

Will the remedy of increased rates for their services be of any avail, so far as the shipping public is concerned, in the direction of affording them greater facilities for making shipment? It is greatly to be doubted whether this will be the case. The financial history of the Grand Trunk Railway, for instance, indicates strongly that the increases will not enable the company to do any better; in short, it indicates that the remedy proposed is only a temporizing one, and that what the railways need is not a financial tonic, but a surgical operation.

The average shipper, perhaps, does not look into the financial condition of the railways as much as he should, and for this reason some of them to-day are showing sufficient sympathy with the railways to back them up to a considerable extent in their requests for a flat rate increase of 15 per cent. in their freight charges. What will they do with this money if they get it? While only they can answer this question, it is important to look into their past record. First of all, the Grand Trunk Railway is managed in London, a situation which cannot be ideal under any conditions. The Grand Trunk pays dividends upon its preference shares to the average amount of $3,610,643 annually. Its common shares have never paid any dividends. It is hard for the layman, and particularly hard for the shipper, to understand why the preference shares should be paying a dividend while the company is not investing sufficient money in maintenance and equipment to enable it to meet the demands upon its system. Should not the money that is going into dividends be devoted to improving the road's ability to serve the public and, as a result, improving its own position from the point of view of its future dividend-earning capacity?

That this view is a sound one is pretty generally conceded. Sir Henry Drayton and Mr. W. M. Ackworth, in their report to the government upon this point, set the matter forth quite clearly and simply. "The average amount paid in dividends by the Grand Trunk Railway," they say in their report, "has been $3,600,000 per annum. So the stock exchange valuation practically capitalizes the dividends on 5 per cent. basis. And this, in a rapidly-developing country, might be reasonable if the dividends had been earned and could be maintained. But, in view of the statement of the company's own officers that $21,000,000, which ought to have been spent out of revenue for maintenance, has not been so spent, it cannot be contended that the dividends have been earned. In view of the further fact that the company has to face immediate liabilities of over $5,000,000 per annum in connection with the Grand Trunk Pacific, and of the statement of its own officers that a capital expenditure of $30,000,000 is immediately required on its own lines to put the company in proper condition to do its existing business, it can still less be contended that the dividends are maintainable. . . . It is evident that the Grand Trunk Company is not, and will not be for some time to come, in a position entitling it to pay out any money at all in dividends."

When the government commissioners, who enquired into the situation closely, have no hesitation in saying that the company is not earning its dividends, and that these dividends have been paid regularly, it is difficult to make the shipping public feel that they are getting a square deal when they are compelled to pay increased rates for the transportation of their goods. If the dividends were cut off, and if unearned dividends had not been paid in the past, they would be able to look at the matter from a very different point of view.

A peculiar part of the whole situation is the indefensible nature of the increases made. Simply and solely, the requests for further charges by the railway companies of late have been based upon the assertion that they need the money. They cannot be based logically upon a claim that the increased operating costs make them necessary; for, if the railways were well managed, they would be able to earn good dividends at present tariffs, as the Canadian Pacific Railway is doing. An example of the nature of the increases is the new minimum schedule of weights on shipments of lumber, which are given in detail elsewhere in this issue. Minimums are established which are considerably beyond the capacity of the cars in a number of cases. The advances mean simply an arbitrary tax upon the shipping public for services that are not rendered. Take also the increased stop-over charges that are now proposed. The new tariff for stop-over privilege is 1 cent per hundred pounds (the old rate), with a minimum of $5 per car. Even with the increases in the minimum weights of cars, a $5 minimum on stop-over will involve a tax of from 50c to $1.50 per car in a great many cases, for which the company has performed no service. Take, for instance, a car on which the new minimum is 45,000 pounds. Under the old stop-over tariff the charge would be $4.50, yet it must be $5 under the new tariff. Where the minimum is 40,000 pounds the unearned tax on the same basis amounts to one dollar. Such exactions cannot be defended.

The 15 per cent. increase in freight rates, for which the railway companies are asking, is on much the same footing as the rest of the increases. Possibly some people will feel that this is to a certain extent justified, in order to save the railway companies from further losses. If an extensive increase is found to be necessary, however, it should

not be a flat rate increase on all traffic, but should be graded according to the circumstances of each particular case. There is no justice, for instance, in putting a 15 per cent. increase on the charge for a long haul and a 15 per cent. increase on a charge for a short haul. The effect would be to create in some cases a barrier against trade in some of the commodities that are subject to the long haul.

One of the readers of the Canada Lumberman suggests that lumbermen should write to Sir Henry Drayton, expressing their objections to the frequent increases which the railway companies are obtaining. The matter cannot be brought to the attention of the Dominion Board of Railway Commissioners too strongly, and a large number of letters to Sir Henry Drayton, the Chief Commissioner, would bring the matter to his attention forcibly. Lumbermen have been getting a pretty heavy deal from the Railway Commission of late, and should start something effective in the way of protest if they wish to confine the increased railway charges within reasonable bounds. Personal letters will, perhaps, have a good effect, but the most effective means that could be adopted would be the holding of a convention of representatives of all the lumbermen's associations in Canada to discuss the matter in detail and to draw up a vigorous presentation of their side of the case, to be laid officially before the board at the earliest possible moment.

It is interesting to note that, according to the opinion of Mr. Gordon Waldron, representing the United Farmers, in their protest before the Dominion Board of Railway Commissioners, an increase of 15 per cent. in freight and passenger rates and a 15 cent per ton increase on commercial coal, would provide an additional revenue to the railways of $39,000,000. Of this amount the Canadian Pacific Railway would get more than $18,500,000, the Canadian Northern Railway $5,321,000, and the Grand Trunk Railway $5,873,356.

Ontario Retailers Ready to Organize

Retail lumbermen in Ontario are taking keenly to the proposal for the formation of local retail lumbermen's associations to represent the various sections of the province, and a central association, with headquarters at Toronto, to look after the mutual interests of the local associations. The agitation for this move had its origin with the Southwestern Ontario Retail Lumbermen's Association a short time ago. At their meeting early in May they appointed a committee, with instructions to act in whatever manner they thought best to induce the retailers in other parts of the province to organize along the lines suggested. This committee has lost no time in getting to work. First of all it enlisted the sympathies of some of the Toronto retailers who have been communicating with retailers in all parts of the province, laying the plan before them and asking for their co-operation. Many replies have been received, all of them being favorable to the proposal. Since the idea was first mooted, a few months ago, it has taken quite definite shape. Discussion has revealed the fact that the plan for local associations and a central one is the only feasible method of handling the situation. Other Ontario associations which were formed in the past were short-lived, largely because they covered too wide a field and were not able to work out definite plans that would be of interest to all the members. By forming local associations this difficulty will be overcome, and by having a central association operated in conjunction with the various local associations it will be possible to take care of many important mutual problems that are too big for the local associations to handle.

That the plan is making good progress is shown by the fact that the retailers in Toronto and Hamilton have given it hearty support. No steps have yet been taken in either of these cities to organize, but the retailers in both places are working out their ideas, and within the nxt few weeks will probably have matters in shape for calling preliminary meetings and forming organizations of the retailers in the districts of which they are the natural centres. In Northern Ontario many of the prominent retailers have expressed their approval of the idea, and their desire is to see it put into effect without delay. In Eastern Ontario the retailers are equally keen to see an association organized and to have it represented in a central association. Retailers in Ottawa, Kingston, Brockville, and other places have given the movement their support, and intend to hold a meeting at an early date.

When the various sections have been organized and have appointed representatives to a central association the work will be well under way, and the testing time of the plan will have arrived. No amount of organization will ever be effective unless it has not only the support of a large membership, but also the individual assistance of all the members in developing its many lines of activity. A retail lumbermen's association can do a great many things for its members that are of practical value. In the first place, it can handle those more or less local matters that formerly were considered to be the chief duties of such an association. In addition to these it can work out plans for the improvement of trade methods and conditions, plans which were not even thought of a few years ago. The progress of the association movement of late has been based almost entirely upon these new services. Some of the chief lines of service are in connection with advertising, plan books, insurance, credit information, etc. It would take a great deal of space to explain these in detail. When the retailers get together it will be easy enough for them to obtain full information as to the working out of these services from the successful associations which are already in operation both in the United States and in Western Canada. Briefly, some of them may be outlined. In the matter of advertising, for instance, an association can be of great value. To many a retailer advertising is a very difficult problem; yet an association, by its wide connections and the combined experiences of its members can work out advertising copy and methods which can be counted upon to give the best results—much better results than many of them ever thought to be possible. This is being done by other associations, and is one of their best service features.

The plan book service, inaugurated by most of the large and successful retail associations already in existence, is a great feature of their work. These books are furnished to members who keep them in their offices and are enabled in this way to show to their customers plans of any kind of a building that they wish to construct, together with details of the materials required and the costs. In a great many cases these books convert a curious enquirer into a customer, and they appeal so strongly to the customer that he may be counted upon to purchase lumber more freely than he would if he had to find out most of these details for himself.

Some retail associations have been operating insurance departments for a number of years, and have enabled their members to obtain good, safe insurance at a mere fraction of the cost which they had to pay when only the old line companies were available.

Good credit information is vital to the success of any retail dealer. Credits are the rock upon which many a good retail business has been broken up. There is no way in which such information can be obtained so easily and so thoroughly as by co-operation among dealers. This has been demonstrated clearly by those associations which have already been organized. It is a natural development for the retail association to form a credit information exchange, and, once it is formed, it repays to its members many times over the cost of membership, to say nothing of relieving them of the anxieties connected with trade when one has only his own experience to guide him.

Legislative matters sometimes affect the trade very closely, and the individual is helpless if he desires reform, or wishes to prevent changes which are to his detriment. Organization is the only way in which this problem can be dealt with. Only by means of presenting a combined front is it possible to make the interests of the trade felt when new laws are being passed, or when revisions of existing laws are found to be necessary.

The systematizing of trade methods is a subject that could be discussed from now until the day of judgment and nothing achieved by individual effort; yet terms of credit, varieties of stock carried, delivery problems, labor difficulties, substitute competition, systematizing of cost accounting methods, and one hundred and one other pro-

blems of the retail business which are all full of difficulties for the individual, can be dealt with by an association effectively.

There is no argument, in short, that can be raised against the plan, and everything is in favor of it. It is encouraging to see the way in which the Ontario retailers are now taking hold of the matter, and we confidently expect that before long the whole plan will be in operation. We know, from the results obtained elsewhere, that the trade will be benefited extensively.

U. S. Lumbermen Showing Fine Patriotism

It is impossible to witness what the lumbermen of the United States are doing in the way of co-operating with their government to promote rapid preparations for the war without feeling admiration for the manner in which they have gone about the whole business, and, looking back upon certain events in Canada in connection with the shell box industry, a feeling steals over us that, much as Canada has done, possibly our friends to the south are in the way of doing much greater things. It would not, perhaps, be right to compare the efforts of the people of the United States in this direction with those of Canadians. When we entered the war we had little or no precedent to go upon in our various undertakings. We had to develop our own plans and methods of putting them into operation. Moreover, we had no idea whatever, and nothing to assist us in forming an idea, as to the probable duration and intensity of the struggle. In both these respects the people of the United States have the advantage of us; they know what they have to face, and they have all our mistakes and successes to guide them. Yet the enthusiasm and loyalty which is being shown by industry in general throughout the country are greater, perhaps, than we in Canada were prepared to see.

It is characteristic of that great organizing and pushing ability of the United States citizen which has made him famous throughout the world that, individually and as a nation, the people have been able to emerge from times of peace into the war, almost overnight, and to set in motion their vast human and material machinery in a manner which is confounding their critics, both at home and abroad; those who, previous to the war—the German nation included—were so fond of asserting that the co-operation of the people of the United States would mean little in the way of assistance to the Allies. We see the whole situation more clearly to-day. We see that the assistance of the United States will be a great determining factor in bringing about the end of the war, and those who are engaged in the lumber business in Canada now see that not the least important, or progressive, of the various elements contributing to the success of the efforts of the United States will be the patriotic work of the lumber manufacturers in the great producing districts of the South and the Pacific Coast.

Lumbermen of great experience in many parts of the United States promptly offered their assistance to the government, upon the outbreak of war, and this assistance has been utilized freely in drawing up schedules of the vast quantities of timber and lumber required, in determining the price for which it is to be purchased, and in systematizing production and delivery. Remarkable speed in delivery has been obtained already in connection with the furnishing of material for the construction of cantonments. Mills in the South and West are ready to furnish, almost immediately, as much material as the government's shipping board will require for the construction of wooden vessels; and in all these preparations for the furnishing of great quantities of material the outstanding feature seems to be the fact that the manufacturers are promptly undertaking to provide this stock at prices considerably below those for which the material could be disposed of in the open market.

Interesting figures are being made public regarding the quantity of material that the government will consume in shipbuilding, cantonment construction, and other work. During the next twelve months, for the purpose of national defence solely, the consumption is estimated at 2,000,000,000 feet, which strikes one as an enormous quantity of lumber and timber; yet this great amount is only one-twentieth of the annual lumber production of the country. The industry will be able to furnish it quickly and efficiently. No less than 140,000,000 is already upon order to be used in the construction of 100 wooden vessels. This order has been placed with the Southern Pine Emergency Bureau, and will be distributed among Southern mills, which are undertaking to furnish it at an average price of $35 a thousand feet at the mills. Training camps for the navy will use 200,000,000; aviation school cantonments, 120,000,000; boxes and crates for the army and navy, at least 200,000,000 feet, and so on. Quantities are being required which are so large as to make one realize something of the greatness of the task the United States undertook in entering the war, yet the outstanding feature of the whole thing is that these requirements, abnormal as they are, both as to quantity and to speed of delivery, are being taken care of as though they were regular features of the trade. The patriotism and efficiency of the lumbermen of the United States are being displayed in a marvellous manner, worthy of the greatness of the cause for which the country is fighting, and worthy of the best business and industrial traditions of the people

Canadian Portable Houses in France

During a discussion in the House of Commons recently, Sir Geo. E. Foster, Minister of Trade and Commerce, replying to a question about ready-built houses for France, said:—"The matter was brought to my attention, and I took it up with the department and had the woodworkers plan certain houses. After these plans were made it was thought better—and under my advice it was done—to send the plans to Paris to have them thoroughly looked into and vised, as it were, by governmental authority, acting either directly or through a committee. That was done, and we received modified plans from them for two or three different styles of what we would call shacks, to be used temporarily until more permanent buildings could be erected. In every case their plan called for a more elaborate and more costly building than we had planned. Our buildings would cost from $75 to $100, but with the improvements, coverings, and the like of that, suggested by the French authorities, they would cost considerably more. However, a number of houses were constructed and I got transport for them free of charge to Paris, where they were on exhibition in the Champs Elysees. I myself saw them when I was over there last summer. They had the name of Canada on them, and served to show not only our plan of construction for temporary buildings of this kind, but our materials as well, and they were seen by a great many people. But the war has gone on much longer than anybody thought it would, and although we know now what they want and though the plans are in the hands of the woodworkers of Canada, not much is being done at present. They, too, I suppose, are awaiting the proper time. What works directly against them is the absolute impossibility of getting transport for goods."

U. S. Lumbermen Adopt War Orphans

Memphis lumbermen have adopted 100 war orphans of France by subscribing $7,300 for their upkeep for a period of two years. France has 200,000 or more orphans whose fathers have fallen in battle. The French Government allows 10 cents per day for the support of each destitute child. This is not enough, and the Fatherless Children of France Society is seeking to raise an additional 10 cents for the support of each child. This will enable each orphan to remain sheltered in its own home and still have ample nourishment and opportunity for education and physical growth.

Canadian Railways Seek Many Advances

Minimum Weights on Lumber Increased—Fifteen Per Cent. Freight Rate Advance Wanted—Stop-off Charge Increase Made

The Canadian railways have put into effect a tariff increasing minimum weights on lumber shipments. The new minimums are set forth in C. P. R. Tariff E, 2886, effective May 21st. Compared with the minimums formerly in effect they are as follows:—

	New Minimum Weight Pounds	Old Minimum Weight Pounds
Under 35 feet long inside or platform measurement for clapboards, flooring, shingles, lath and dressed lumber	34,000	30,000
Except when cars loaded to full capacity will not contain this minimum, actual weight, but not less than	30,000	
Cars 35 feet, and not over 36 feet 6 inches, inside measurement, for box, stock and gondola, or 36 feet 10 inches platform measurement for flat cars, boards, flooring, shingles, lath and dressed lumber	40,000	34,000
Except when cars loaded to full capacity will not contain this minimum, actual weight, but not less than	35,000	
For cars of all kinds under 35 feet in length inside or platform measurement for lumber (except dressed lumber) and other forest products	40,000	30,000
Except when cars loaded to full capacity will not contain this minimum, actual weight, but not less than	35,000	
For cars of all kinds 35 feet and not over 36 feet 6 inches inside measurement for box stock and gondola, or 36 feet 10 inches platform measurement, for box stock and gondola, or 36 feet 10 inches platform measurement, for flat cars, lumber (except dressed lumber) and other forest products	45,000	34,000
Except when cars loaded to full capacity will not contain this minimum, actual weight, but not less than	40,000	
When box, stock or gondola cars of greater length than 36 feet 6 inches are used, the minimum weight for a car of that length will be increased 5 per cent. per foot, or part thereof. When flat cars of greater length than 36 feet 10 inches are used the weight for a car of that length will be increased 5 per cent. up to 37 feet 6 inches, and an additional 5 per cent. for each foot or part thereof over 37 feet 6 inches.		

It is expected that the lumbermen will appeal to the Dominion Board of Railway Commissioners against the increases.

Increased Minimums Not Justified

Montreal, June 23.

Editor Canada Lumberman:

I find that very few of the lumbermen are aware of the fact that the railroad companies have increased the minimum weights on carloads of lumber—on cars under 35 ft. from 30,000 pounds to 35,000 pounds, and 35 ft. to 36 ft. 6 in. cars from 34,000 to 40,000 pounds.

Down our way most of the spruce lumber is sawn 12 and 13 ft. lengths and piled 10/13 ft. We find it is impossible to load dry spruce in 35 ft. and 36 ft. cars to a minimum of 40,000 pounds.

We think that the railroad companies are certainly getting enough increase without making the lumber shippers pay for something they do not get.

It is the writer's idea that it would be a splendid plan if your paper would suggest that the lumber dealers write to Sir Henry Drayton about this matter. It seems to me that the railroads are continually asking for increases, and, when the war is over, our Canadian lumbermen are going to have a hard time to sell their lumber under such handicaps as the railroads are placing on the shippers.

Campbell, MacLaurin Lumber Company, Ltd.

Railways Increasing Cost of Stop-over Privilege

Supplements to railway tariffs have been issued, effective July 13, making changes in the arrangements for stop-off for dressing, re-sawing, or sorting and reshipment of lumber (Canadian traffic). The minimum stop-off charge has been made $5 per car. The revised rules will read as follows (C.P.R. tariff example):

Shipments of rough lumber, carloads, for dressing, re-sawing or sorting and reshipment, within thirty days (except as shown in Rule 1) after arrival at stop-off point; and moving between stations on the C.P.R. in Canada, Fort William, Ont., and east, may be given the benefit of the through rate, original shipping point to final destination (provided stop-off point is on direct run), plus 1 cent per 100 pounds, minimum $5 per car for each stop-off, under the following conditions:

The stop-off privilege will apply only to straight carloads of hardwood or straight carloads of softwood, not on mixed carloads of hardwood and softwood, both into and out from stop-off point. It is not permissible to forward from stop-off point on through rate from point of origin other than the same kind of lumber received. Softwood lumber must not be substituted for hardwood, shingles for lumber, or vice versa, nor can one kind of softwood be substituted for another, or one kind of hardwood for another, for example: pine for spruce, oak for maple, pine for oak or maple, etc. Neither is it permissible to substitute Canadian lumber for United States lumber or vice versa. Where there is any substitution of lumber current tariff rate will apply from stop-off point.

Shipping bills and paid freight receipts must, in all cases, both in movement from point of shipment to stop-off point and on outward movement to final destination, distinctly indicate the kind of lumber, i.e., birch, pine, spruce, etc.; also on outwards movement from stop-off point show the process through which it has been put.

Proposed Freight Rate Increases

The Dominion Board of Railway Commissioners held a sitting at Montreal on June 20, at which the application of the railway companies for additions to existing freight rates was further considered. The chief part of the discussion related to the application for an increase of 15 cents per ton on coal.

Mr. W. S. Tilston, of the Montreal Board of Trade Transportation Bureau, read a letter written by Mr. G. Hadrill, secretary of the Board of Trade (which was concurred in by the lumbermen's section), stating that the council of the board, "recognizing the need of an improved service and the need of the railway companies for financial assistance to enable them to provide the necessary equipment and additional facilities, as well as to cover the increased costs of labor, coal, and supplies, will not oppose the application of the railway companies for a general advance on existing tariffs covering freight and passenger tolls, except with regard to the following conditions:

"1. That the amount of the increase shall be such as the Board of Railway Commissioners is convinced from evidence submitted is necessary under present abnormal conditions, but that it shall not exceed 15 per cent.

"2. That such increases do not apply to terminal rates, charges, and allowances, or absorptions and rates and charges for demurrage, weighing, switching, car service, transfer, diversions, reconsignment, refrigeration, icing, storage, elevation, and other transit or special services.

"3. That, owing to the general hardship involved by the current high prices, no advance be made as applying to coal and coke, and that consideration be given as to the wisdom of applying advances to low-grade commodities, such as crushed stone, sand, clay, and gravel, etc.

"4. That the advance be distinctly regarded as a measure of emergency, and therefore, that any advance that may be granted shall apply for a period of one year only, when any extension of that period which might then be asked for by the railway companies could, if conditions warrant it, be considered by the Board of Railway Commissioners.

"I am to add that the council is of opinion that in the case of contracts entered into by shippers prior to the notice of application by the railway companies for an advance in their rates, in event of your board granting any advance, consideration should be given to such contracts."

The consideration of the proposed revised demurrage rate was postponed until the sitting in Ottawa, on July 5, when a conference of the various interests will be held, at which an endeavor will be made to arrange rates with the railway companies.

B. C. Lumbermen Protest Againt Higher Freights

Protest was recently made before the Dominion Board of Railway Commissioners at a meeting in Vancouver against the proposed increase of 15 per cent. in freight rates upon Canadian railways. It was pointed out that the lumber and shingle manufacturers already have a special commodity rate, and that they, therefore, are not interested in the classification, but they objected because their products, not being of a perishable nature, were often sidetracked for other goods. The chairman of the board remarked that Coast lumbermen were not eager for business, and referred to a large order from the prairies that had been turned down by a large mill. If the railways were allowed to increase their rates, the board was asked to give the mill men time to deliver their orders, about four months, before the order became effective.

Lieut.-Col. Sir William Price, of Quebec, has returned to Canada from the front, on sick leave.

Campbell, MacLaurin Co. Appoint New Representatives

Fred W. Sage, Hamilton, Ont.

Frank L. Reed, Sarnia, Ont.

The accompanying portraits represent Mr. Fred W. Sage, Hamilton, and Mr. Frank L. Reed, Sarnia, Ont., who have recently been added to the sales force of the Campbell, MacLaurin Lumber Company, Ltd., Board of Trade Building, Montreal. Mr. Fred W. Sage will represent the firm in Eastern Ontario, and Northern New York State. Mr. Sage was born in Hamilton, Ont., and educated there in the public and high schools. He learned the lumber business with the M. Brennen & Sons Manufacturing Company, Ltd., for whom he has been acting as salesman and buyer during the past eight years.

Mr. Frank L. Reed will represent the Campbell, MacLaurin Lumber Company, Ltd., in Western Ontario and Detroit. Mr. Reed was born at Clyde, Ohio, and at the age of 6 moved with his parents to Watford, Ont., where he was educated in the public and high schools. For ten years Mr. Reed was employed by the late H. P. Lawrence, of Watford, as foreman in his retail lumber yard. Subsequently he moved to Sarnia and became engaged in the wholesale business, occupying the position of foreman for seven years with Mr. E. A. Lebel and the LeBel, Turnbull Lumber Company. During the past three years Mr. Reed was engaged by the Spanish River Lumber Company as their Western Ontario salesman.

By the engagement of these two experienced salesmen the Campbell, MacLaurin Lumber Company, Ltd., have rounded out a thorough organization for handling their extensive trade in Eastern Canada and the Northern States. In New York City they are represented by Mr. Maurice H. Gatchel, and Mr. James Yelland covers the Province of Quebec.

Rainy River Pulp and Lumber Co. Start

The Rainy River Pulp and Paper Company, whose mill is at Port Mellon, Howe Sound, has commenced the production of kraft pulp. E. L. Mohn, vice-president and treasurer, who is also filling the position of managing director of the company, reports that the opening day's running of the first of the four units to be installed has surpassed all expectations in regard to smoothness of its operation and quality of kraft pulp produced. This company is the first of its kind on the Pacific Coast, and marks the commencement of new, and what promises to be an extensive, industry for this section of the Dominion, which has hitherto been confined to the eastern provinces of Canada. The plant has been changed from a soda paper mill to a kraft pulp and paper plant, and that accomplished in record time. The plant was purchased by the Rainy River Pulp and Paper Company from the previous owners on February 1, 1917. In less than four months the company has effected an efficient and capable organization headed by James Beveridge, who is in full charge of the plant. The plant is thoroughly equipped for the production of kraft pulp as well as the finished paper. Under the Pulp Act of the British Columbia Government the company is assured, at a very nominal tax, ample supply of pulp wood for thirty years' operation. Mr. Mohn states that plans for the second unit have been made, and that work will start immediately upon its installation, which will double the present capacity. The company's officers include Robert Sweeney, of New York City, who is the president and original organizer of the company, and J. C. McCrary, secretary of the company. Mr. McCrary is also general sales manager.

Mr. William Rutherford, the new chairman of the Montreal branch of the Canadian Manufacturers' Association, was among the members attending the annual convention of the association at Winnipeg.

National Hardwood Changes Adopted

New Grade of Selects Meets with Approval at Annual Meeting—John M. Woods Again President

The National Hardwood Lumber Association held its twentieth annual meeting at Chicago on June 14 and 15. The most important matter dealt with was the adoption of a number of changes in the inspection rules. These changes have already been published in the Canada Lumberman. They include the adoption of a grade of selects which will eliminate the undue spread that has formerly existed between grades of No. 1 common and firsts and seconds. It will also result in more efficient and satisfactory grading and sale of hardwood lumber in relation to the uses for which it is intended.

Briefly, the intermediate grade, which is to be known as "selects," is to include boards which will grade not below seconds on the best face and not below No. 1 common on the reverse side, and will admit other boards of equal value. It was the general belief of those present at the meeting that the new rule was practicable and workable. Other changes were introduced in regard to cypress rules, wagon box boards, bending oak, and oak construction material. All the rules were adopted without opposition, with the exception of that in relation to cypress, and in this case the majority was overwhelming.

It was decided that the changes adopted should become effective on September 1, 1917, and that the additions should be immediately printed as a supplement to the present book of grading rules and be put into effect immediately, with the exception that the inspection department should be instructed not to enforce them in the inspection of shipments made by any members having contracts made on the existing rules before June 15 who should make shipments before January 1, 1918.

The meeting was devoted far more than usual to an exchange of views between members in regard to trade conditions. It was quite noticeable that the industrial situation brought about by the entry of the United States into the war was the subject uppermost in the minds of all the members present. In former years the annual meetings have been devoted mostly to discussion of proposed changes in the inspection rules and other subjects of similar importance which were brought up for definite decision by a vote of the members. This year, although extremely radical changes were made in the inspection rules, there was, comparatively speaking, very little discussion about changes. The amended rules presented by the inspection rules committee were adopted with very little discussion.

Excellent reports were presented by the president, Mr. John M. Woods, and the secretary, Mr. F. F. Fish.

The election of officers resulted in Mr. John M. Woods being again selected as president. Mr. J. V. Stimson was elected first vice-president, John W. Dickson second vice-president, and C. A. Goodman third vice-president. The following directors were elected to serve three years:

C. H. Barnaby, T. A. Washington, Edward Buckley, W. E. Chamberlain, W. J. Hetherington, George W. Morgan, M. J. Quinlan, and W. H. Russe.

On the suggestion of the president, the association decided in favor of appointing a legislative committee. On the proposal of the secretary, it was decided to take steps to discipline members who do not abide by the official inspection of the association.

English Spruce Situation Unchanged

The Timber Trades Journal, of London, Eng., in its issue of June 9th, says: "There is unfortunately still very little to say about the spruce market. Some importers are hoping to see the facilities which are granted to the Scandinavian extended to the American, or at least to the Canadian trade, especially in view of the many important uses to which spruce is now put. We fear the wish is father to the thought. The circumstances are very different. It would, for instance, be difficult for a prospective importer of goods from America to make the statement that "the proposed parcel will not displace foodstuffs or munitions." In regard to Scandinavian imports of wood, the presumption is that this question can be safely answered in the affirmative, for both Norway and Sweden are themselves suffering very severely from a want of food; but with respect to America, the presumption is the other way. Small lots of spruce in liners find their way over from time to time, particularly to the Mersey, and they are quickly snapped up for immediate consumption; but as to the great bulk of the shipments, these will in all probability be taken by the French and British Governments."

At a recent meeting of the Toronto Board of Education a communication from Mr. L. B. Beale, of the B. C. Forest Branch, was read, offering to present a car of British Columbia lumber for use in the woodworking classes of the Toronto Technical School. The offer was gladly accepted.

Ontario Retail Association Assured

Prominent Firms in All Parts of the Province Supporting the Proposal— Organization Meetings Being Arranged

Much progress is being made in the movement for the formation of local retail lumbermen's associations in Ontario, together with a central association to look after the mutual interests of the local organizations. Toronto, Hamilton, Ottawa and Northern Ontario retailers are taking the matter up and working earnestly, and the prospects are excellent for the accomplishment of definite results at an early date. A strong circular letter, sent out recently by Mr. Walter C. Laidlaw, of the R. Laidlaw Lumber Company, Limited, Toronto, to many Ontario retailers, has aided the movement greatly. Mr. Laidlaw's circular was as follows:—

Circular Sent to Ontario Retailers

The retail lumber dealers in Southwestern Ontario between London and Windsor have an association, as you are no doubt aware, and at their last meeting appointed a committee to consider the organization of the rest of the province. It has been suggested that district groups might be formed each with their own officers and committees, who would then form a provincial association with one paid secretary acting for all and co-ordinating the work.

The proposed groups are as follows:—

(1) Southern Ontario—Windsor to London—Windsor.
(2) Western Ontario—Ingersoll to Hamilton—Hamilton.
(3) Central Ontario—Burlington to Belleville—Toronto.
(4) Eastern Ontario—Napanee to Pembroke—Ottawa
(5) Northern Ontario—Mattawa to Sault Ste. Marie—Sudbury.

Briefly, the objects of the association would be:—

(a) To promote the general welfare of the retail lumber dealers.
(b) To collect and distribute information concerning the proper use of wood and the general state of the lumber industry.
(c) To correct business abuses in the lumber industry.
(d) To promote uniformity in the customs and usages of the lumber trade in Ontario.

The enclosed memorandum of some things being done by a retail association in the United States will give an idea of the line of work.

There will be no rules or regulations that in any way shape or manner infringe upon each man's right to conduct his business as he sees fit.

The annual membership dues will be determined by your committee after organization, and will probably be from $10 to $15.

You are invited to sign and return the enclosed application form. When a reasonable number of applications for membership are received, a meeting will be called in each district for the election of officers and committees.

What Other Associationns Are Doing

The memorandum referred to above was as follows:—

During a recent month one association carried on the following work:—

1. Advised its members of matters of interest relating to the following:—
   (a) Lien law.
   (b) Building code and local by-laws.
   (c) Freights, demurrage, etc.
   (d) Terms of sale.
   (e) "'Buy a Home Campaign."
   (f) Advertising copy for local papers.
   (g) Pushing the sale of certain lines of lumber; e.g., silos, implement sheds, cedar chests, etc.
2. Secured important amendment to the lien law.
3. Arranged district and county meetings of retail lumber dealers for the study of local problems and a better knowledge of local conditions.
4. Assembled valuable information in regard to the expenses of doing business as proved by experience in order to make it available for each member. The importance of an accurate knowledge of costs is obvious. Clear thinking, the intelligent application of principles and close co-operation with each other will build sound and successful business.
5. Advised members in regard to certain fraudulent concerns who had sent out circular letters to the retail lumber trade.
6. Secured credit information in regard to contractors and builders who moved from one town to another, and gave their past record and history to the lumber yards in the new town.
7. Induced a certain manufacturer to ship an old order at original price after he had arbitrarily cancelled it and refused to ship. The result to this member in dollars and cents would pay his association dues for a good many years.
8. The Grading Committee conferred with the Southern Pine Association on grading rules and succeeded in modifying a number of arbitrary changes proposed by the manufacturers. Uniformity of grading secured. Transit cars discouraged and legislation promoted to prevent it.
9. Arranged that their members be furnished by the manufacturers with advertising matter, plans, specifications, etc., to create a better demand for lumber.
10. Furnished their members with comparative figures on the increased prices of iron, wheat, paper, glass, glue and other commodities in contrast to lumber.
11. Interviewed the Railway Commission to lift the embargoes on lumber and to secure better car supply from the railroads for lumber.
12. Furnished their members with a classified directory of manufacturers and wholesalers furnishing the various items of stock handled by retail lumber yards.

N.B.—DON'T YOU THINK IT IS TIME THAT THE ONTARIO RETAIL LUMBER DEALERS HAD A SIMILAR ORGANIZATION?

A Hard Problem for the Retailers

Retail Lumber dealers have many problems of a difficult nature to deal with, and one of the most troublesome arises in connection with obtaining money for stock delivered on a building job, where the owner issues cheques on progress certificates made out by the architect. Without some hard and fast agreement between the owner and the architect or the supply firms the way is open for the contractor to divert these cheques to his own use and to leave the lumber dealer out in the cold. Toronto retailers have recently sought to interest the architects in this matter and have them insert a clause in their agreement with the owner to the effect that payments on progress certificates shall be made out not to the contractor, but to the supply firms. So far nothing has been accomplished along this line.

In Minneapolis, Minn., a partial solution of this difficulty has been reached. The Credit Department of the Builders' Exchange of Minneapolis sends the following form letter to every owner who takes out a building permit:

Dear Sir,—In accordance with the policy of the Builders' Exchange, to work in every way for the betterment of building conditions in the city of Minneapolis, the Credit Department of the Exchange has instituted a new feature of the work, having in mind the interests both of its own members and those of the general public as well.

This feature consists of calling the attention of prospective builders to the necessity of taking proper precautions to see that all bills for labor and material are paid, not only on completion of the job, but as the work progresses and as money is being advanced.

The material man has no desire to file liens for his accounts, but is frequently obliged to do so on account of the carelessness of the owner and the unreliability of certain contractors.

The natural inclination to accept the lowest bid, regardless of the financial responsibility of the contractor, often leads to trouble and additional expense to the owner.

There will be no danger of the owner having to pay bills twice if he will use ordinary caution and judgment.

Insist on the contractor furnishing receipts for labor and material as the work progresses, and especially before the final payments.

Yours very truly,

Building Material Credit Association.

In actual practice it is found that this piece of advice given to the owners puts them on their guard, and the amount of trouble from this cause is greatly reduced.

Good Demand for Thick Stock

The Union Lumber Company, Toronto, recently discharged two vessel loads of lumber at Wiarton, Ont. Part of this stock is being exported to South Africa and the balance is for local consumption. This is thick stock that had been cut for the British market, but, as space could not be had for shipments across the Atlantic, the company decided to dispose of it elsewhere, and have been able to do so to good advantage. Much of the stock will go to box factories, where it will be resawn for box purposes. The same company have recently shipped a vessel load to Tonawanda, the shipment containing 800,000 feet of thick Norway.

Canadian Foresters in France

Group of Canadian Forestry officers in France—Capt. G. T. Reid on the right.

The accompanying illustration is a reproduction of a photograph taken in France, not far behind the firing line. It shows the officers of the 20th Company of the 247th Forestry Battalion, raised in Canada, now operating in France. This battalion was raised in 1916, and one of the officers shown is Captain G. T. Reid, who was in charge of the raising of the Toronto section of the battalion. Captain Reid is shown standing at the right of the picture, and lumbermen will readily conclude that the life in France is agreeing with him. Captain Reid is a son of Mr. J. B. Reid, the well-known retail lumber dealer of Toronto. The battalion went overseas in November, 1916, and was immediately sent to France, where it has been operating in the forests ever since its arrival.

With the Canadians in the Trenches in France

Visualize if you please an up-standing, clean cut, sun-browned American boy-man dressed in the uniform of the Navy. Let the shoulders be broad, the figure rather thin yet giving promise of future development, hands well shaped and with that surety of grip and manner of handling objects seen in first class mechanics such as saw filers. Such is Guy C. Worcester, now at the Naval Training Station, Chicago, and formerly a member of one of the Canadian field artillery regiments. He spent fourteen months in the trenches in France, an extremely interesting account of which he gave to the members of the Western Society of Engineers recently. The man part of him was plainly evident in the grimness with which he spoke of many things; the boy in the smile with which he told of dancing at a French chateau when off duty while the guns of the battery fired at the Germans through holes knocked in the foundation of the building. He enlisted when aged 17, in the first summer of the war. Some of the things that he told of follow, although the language is not exactly his:

The land that the Canadians hold is just a sea of mud and water In peace time the country is drained by canals and ditches, but now trenches run everywhere and stop the drainage. The boys are all in mud from their knees to their waists most of the time, and this soaking all the time gives them trench feet. The feet and legs swell up and it feels like rheumatism and it takes about six months to get over it. The only way we got dry was to sleep in our clothes; it was then nice and warm in the morning, but we had to get right out in the stuff again so it didn't do much good. The commanders tried a lot of remedies. One thing they sent out was a sort of grease to rub on our feet and legs three times a day. We tried it about one day, but as we couldn't wash any and it stuck—well, we didn't use it any more. We called it anti-frost bite and it was fine for cooking and lights at night. You'd tear off a piece of the top of a sock and dip it in a can and it would burn just like a lamp and you could cook over it fine. So the boys all hollered for more and more anti-frost bite and the commanders back behind were awfully pleased, saying: "It must be doing a lot of good the way the boys are using it."

The worst things of all are the rats. They are everywhere. They are sort of water rats and just can move about on land—the size of big cats they are—very fat and sleek and have increased in number since the beginning of war tenfold at least. You can't look any place at any time of the day or night without seeing a rat, a big, fat rat, about the size of a cat. They have more than they can eat, you see. They don't mind the soldiers a bit; they have become accustomed to them being everywhere. As soon as the light is blown out at night the rats come out of the holes between the sandbags and begin to crawl all over you sniffing. A fellow don't mind it so much until they begin to sniff at his face—it is such a loud sniff, like that of a dog.

When things get a little dull and there's nothing much doing the boys organize Fritz hunting parties You don't have to go; they are all volunteers. I went on one about a week after I got to the trenches. I guess that's probably why I went. I didn't want to miss any excitement—then. Our trenches were just 90 yards from the Germans. It's mighty particular work—Fritz hunting. You go out of your trench at a certain place and you have to be back at just a certain minute or the guard can't tell which side you belong to. Where the guard can't tell they shoot, and tell afterwards.

Well, we went out at about 10 o'clock with big Pierre LeBrun in the lead. Pierre is a big French Canadian as strong as three men and is a reformed Michigan Central fireman. He is the cock of the walk and never does any work except go Fritz hunting. Before I went I sort of envied him. Afterward I didn't. We laid down flat and squirmed ahead inches at a time. We couldn't make a sound, for that would mean fire from both sides. When we came to our wire entanglements we dug under. The ground was fine digging; you could scoop it out easily and then the hole would fill up with water. You would then have to swim or crawl through.

A raiding party always tries to bring back two or three Fritzes so that the officers can ask them questions. You go through the trenches and try to find some intelligent looking ones, for you know if you lose four or five men and kill six or seven Fritzes and then get back with two or three prisoners that don't know anything it is not much use in going. After about three hours we got to the German trench and we could hear the sentry walking back and forth. Pierre got out his Fritz tool—it is the wooden handle of a trenching tool fitted with a cogged burr on the end, and when you hit a man with it he don't say anything—and it took him a half hour to edge along until he got a crack at the sentry. Then we went in and got a couple and brought them back—and, say, they were sure glad to come. They lit out first and were the first ones back to our trench.

The guns used in the English army now are short ones. I should say about a yard long and just about buried in wood. All the metal that sticks out is around the breech and block and where the muzzle shows. The gun is two or three inches broad. This is to keep out dirt, mud and water as much as possible..

I was in London on the night of September 5, 1916, when an English aviator brought down a Zeppelin. I saw it fall, and in burning it lit up almost the entire city. Next day I got out to the ruins. Soldiers had rolled all that was left of the shell up into a roll about breast high and 600 feet long Of course, I couldn't tell just what it was made of, but from what I saw and was told it is evident that the Germans are getting short of aluminum and are using more and more wood and such material in building them. There was a lot of wood used in this one.

When I got home I thought I would work a while, but I guess this soldiering got the best of me, for I took on with the Navy in April.

Following this talk the raising of the regiments of engineers was commented upon and it developed that lumbermen are wanted in practically all of the regiments. Men who know how to handle an axe, how to pull a crosscut saw through trees and timbers, how to build bridges and repair them are wanted. A great deal of wood is used by the armies in the field and enough lumbermen are wanted in the engineering regiments to enable them to act as units of lumbermen if necessary.—American Lumberman.

Rifle Stocks Use Up Large Lumber Supplies

The New England Westinghouse Company, Meridian, Conn., which has a contract for 1,000,000 rifles awarded by the Russian Government, on which it has been working for more than a year, is now producing 500 weapons daily with 1,600 hands employed. The company is now increasing its output rapidly and expects soon to be turning out 1,000 rifles daily. The present consumption of hardwood lumber for stocks alone is approximately 3,500 feet daily, or about a carload of lumber weekly. In addition to this, a considerable quantity of good quality box shooks is required for packing the finished rifles. Specifications for the rifle stock lumber call for thoroughly kiln dried wood, clear of all imperfections, delivered in planks 4 ft. long, 3 ins. thick and 7 ins. wide, it is stated, but since the company has now developed a fully equipped woodworking shop of its own, with very efficient dry kilns especially designed for this purpose, the former specifications may be modified. It is understood, however, that the preference will be given to high grade, heart birch wood.

Pte. Chas. M. Cane Wounded

Last year Pte. Chas. M. Cane was on the casualty list as shell shocked, and now he is again reported as wounded in the right arm from gunshot and in King George's Hospital, London. He is a son of Mr. J. G. Cane, wholesale lumber dealer, Toronto. He was employed at Eaton's before going overseas. He is only 19 years of age and has a brother, Lieut. James Cane, who has been to the front and returned suffering from shell shock some time ago.

The Selection of Lumber Salesmen

Education, Knowledge of Lumber Products and Substitutes, and Enthusiam, all Essential

By Wm. Beebe*

The subject, "Selecting Lumber Salesmen," is one which in a general way could be covered by the same rules as the selection of a salesman for any other line of endeavor, for indeed lumber salesmen must have the same qualities in every way that apply to salesmen representing other commodities, about which there has been so much written. Hence it does not seem necessary to consume any time in discussing this, for selling is a proposition which is very much the same no matter whether one is selling lumber from a retail yard, selling lumber on the road as a traveling salesman to the retail trade, or whether one may be selling bank loans, Liberty Bonds, medical advice, or whether you call your customer a client, as do the lawyers. So I am not going to cover the ground which has been or will be covered, regarding salesmanship in general, except to say that the natural qualifications of any salesman are born ability, good health, honesty, ambition, and a pleasing personality, all of which are subject to development and may be attained to an extent, at least, by training, hard work and experience.

In the selection of a lumber salesman, it is my idea first to investigate and find out if the man has the necessary general qualifications, or the ability to acquire enough of the general qualifications necessary for the selling of any product. Thus my talk must necessarily be based on what a lumber salesman must know to be successful, and as I am here at the request of the Southern Pine Association, and my work is connected with that line of industry, my remarks will particularly refer to the selecting of lumber salesmen to sell yellow pine.

We have attempted for a number of years, rather than go out and forage on our competitors for salesmen, to educate them along the lines that would make them most valuable, and I take it you will be more interested in knowing what, in our opinion, a lumber salesman should know, and the qualifications we would look for were we selecting one; or, in other words, the acquired qualifications in addition to the natural qualifications already mentioned.

My first question to an applicant for a position as lumber salesman concerns his education. A graduate of a high school is much preferred to one who has only finished the ward school, and a college graduate is preferable to a high school graduate. A diploma from a school of forestry is one of the best recommendations a man could have if applying to me for a position as salesman, as the special and technical training given in these schools is invaluable. While a school of forestry does not aim to produce lumber salesmen in any way, but rather professional foresters, yet the field and laboratory work and the time put in at lumber producing mills may prove invaluable to a lumber salesman at any moment, as it all has to do with the harvesting, utilization, extension of markets, and consumption of timber. At these schools one learns much about the purpose for which certain woods are or are not fitted, their commercial importance, their diseases and cures, and the chemical treatment necessary or best to preserve against fire, fungi, or insects. While there are hundreds of successful salesmen, one would be much more valuable to his company and himself if he had a more technical and intimate knowledge of his product, as he would be constantly using it in an indirect manner.

So I say, education is the first thing to be considered in the selection of a lumber salesman, and the more education and special schooling the better salesman he is sure to be.

Knowledge of Product Essential

The next in importance is that a salesman should have knowledge of the merit of his product, and also its limitations. Wood as a building material has qualifications that have been known since the early days of civilization, as it has been available nearly everywhere, and for that reason it has become the universal material for shelter and protection of man and beast. It has the merit of being easy to handle and easy to work into implements with primitive tools, and with its lightness and strength, the ease with which it can be lifted and carried, the fact that it is stronger and will carry heavier weights, weight for weight, than iron or steel; that wooden buildings are the coolest in summer and the warmest in winter, on account of the wood being a non-conductor of heat or cold.

A lumber salesman should know just where his product can be used to better advantage than substitutes. He should know something of engineering records regarding the use of them, and should know all the talking points of his product as compared with substitutes that can be used in the same place. For instance, metal lath are almost universally used back of stucco in houses, and he should know that on account of rust they invariably fail within from eighteen months to seven or eight years.

The successful lumber salesman must know all materials that are being used for substitutes for his product; the merits, limitations and relative cost of them for certain purposes. He should have specific knowledge regarding certain purposes that lumber should or should not be used for, and he should see that dealers, architects and builders give careful consideration to the lumber best suited for specified purposes. This course will inspire confidence in the retailer and consumer, and is of particular benefit to the general industry. In fact. "Use Wood Where Wood Is Best," is a slogan that should not be lost sight of, and a good salesman knows where this is, and why. No salesman can be fully successful unless thoroughly acquainted with the grades of his product, and to know grades he must know about its growth.

Regarding growth, the salesman should know that the pine tree from the time the leaves start to grow in the spring, say in March or until the latter part of June, forms a porous, light colored kind of wood which is called "spring wood," and from about July to the end of the season's growth it forms a much denser growth which is flinty, more or less resinous, and is called "summer wood." It is this "summer wood" that gives strength value to pine wood, and the higher the percentage of "summer wood," the stronger the stick. This embraces what is known as the "density rule," and the dependability of this rule is established by the United States Department of Forestry. It has been adopted by the American Railway Engineering Association, Society of Architects, and various building code associations. The good salesman must know that the density rule is a measure of strength only, and has no reference to the durability.

Where durability is of the greatest importance, consideration must be given to the heart content of the material used, for heart lumber is less affected by fungus than sap wood, and therefore should be used in places where lumber is subject first to becoming wet and then dry. Lumber either always in water or always dry will never rot, but where subject to varying degrees of dampness it should better be all heart, or be chemically treated. The salesman should know something of the prevention of decay by chemical treatment. He should know, first, that what is commonly called blue sap stain is not a form of decay and does not in any way affect the strength of the stock, and he should also know that blue sap fungus never affects the heart wood. Yet this does not mean that the dozens of species of fungi which grow on sap wood will not destroy sap wood; they will often destroy the heart wood as well.

Prevention of Decay

The prevention of decay is a subject that is assuming large proportions, as in 1915 about 38,000,000 ties were treated in this country; also, about 3,000,000 square yards of paving blocks were treated, and the industry is just in its infancy as regards general use. A salesman should know the cost of this treatment; the necessary information as to where to use treated lumber, and the best treatment for certain places. In a few years this will be better understood than at present, and the salesman I would select must be ahead of the times.

Another very important matter that a salesman should be conversant with is creosoted or treated wood blocks for interior use. He should know that they are best in any place where heavy material is handled, such as railroad shops, freight houses, as well as barns, and there is no question of their being the best pavement for streets, for the following reasons: They are the most durable, most economically maintained, the least noisy, and the least injurious to horses of any pavement in existence. He should know that the streets that have the heaviest trucking in America are paved with creosoted blocks because experience shows them to be the best for the purpose. The salesman should also know about creosoted posts and poles, which are rapidly coming into general use, as well as treated material for the use of the farmer, which has been in general use in Europe for many years, but is just becoming known in the United States, largely on account of the cheapness of lumber.

A lumber salesman must necessarily know the grades of his product, as he must be able to tell the customer or builder the grade he should use for certain purposes. There are five distinct grades of timber to be dealt with: heart timbers, No. 1 common timbers, square edge and sound timbers, merchantable timbers, and select structural timbers, besides the numberless grades of car material and yard stock. He should know all about knots, pitch, wanes, checks and splits, and what is allowable in each grade and length of piece, as this information is invaluable and is used every day in many ways, as in adjusting grade claims and advising the use of the proper grade suited to all requirements.

A salesman must know how best to finish his wood so as to bring out the beauty of the grain, by staining, varnishing, enameling or painting interiors or exteriors

Another matter of importance for a salesman to know is concerning silos. He should know that wooden silos are superior to any other kind, for the reason that wood is a non-conductor, and the silage stays

* An address delivered at the World's Salesman Congress at Detroit.

sweeter with less loss in spoilt silage; that wooden silos are easier to repair, can be moved, and that the initial cost is less.

A salesman should know the talking points of so-called mill construction, which means a type of building constructed of wood to withstand fire as much as possible, built with large timbers of not less than 6 x 12 inches, with floors not less than three inches in thickness, and where the outside walls are of brick, the advantages of which are strength of floors and low rate of fire insurance, and a low cost of maintenance as compared with steel or concrete. He should know that a wooden beam will withstand fire better than an unprotected steel beam. He should know that there are very few cases of properly mill constructed buildings burning in the whole United States, while there are hundreds of cases of concrete buildings crumbling down under comparatively small blazes.

Knowledge of Sawmill Costs Essential

A salesman to be successful must know a great deal regarding sawmill costs, and particularly planing mill costs, as there is hardly a day when he is not called upon to quote on something special, so that a knowledge of the cost of ripping, resawing, trimming, special working of accumulations of off grades and handling of them is absolutely necessary. The best place to get this knowledge is at the sawmill; therefore, a salesman who has had sawmill experience is generally much more valuable than one who has not.

The proposition of selecting lumber salesmen resolves itself almost altogether, after you have considered their natural qualifications, into the knowledge that they have of the business, and I have attempted to give an outline of what knowledge, in my opinion, is necessary for a lumber salesman. If I were selecting one, I would ascertain whether the applicant had a working knowledge of all these subjects, as well as dozens of other minor details which are also very important.

There is one other thing that I think is necessary for the success of salesmen in any line of business, and that is that the salesman's heart be in his work. He should feel that the lumber business is his life's vocation and be proud of it, for very few succeed in any line of work they do not enjoy and take an interest in.

Why Lumber Prices Advance

The natural inclination of the consuming public to object to advancing prices has led the Hardwood Manufacturers' Association of the United States to issue a small folder dealing with the increased prices for lumber. Comparing 1917 with 1914, the association states that the increased cost of labor and supplies necessary for the production of lumber are the chief reasons for the increases. A heavy burden has been placed on the manufacturers of lumber, which ultimately must be added to the selling price. "Lumber, the world's third largest industry, is the only commodity which has not increased in price to any appreciable extent in the past ten years. Prices now are lower than in 1906, while steel, iron, copper, coal, cement, and other building materials have more than doubled in value. The cost of producing lumber has increased out of all proportion to the selling price.

The increased cost of labor and supplies is shown in the bulletin in the following table, which gives the advance between 1914 and 1917:

Logs, bought on market	31
Stumpage	100
Labor	20
Horses and mules	40
Oxen	41
Feed	76
Steel rails	93
Railroad supplies	88
Wire rope	91
Manila rope	103
Machinery	60
Oil	29
Saws	52
Planer knives	160
Belts	96
Packing	32
Files	101
Emery wheels	54
Mill supplies	58
Coal	137
Freight rates	8
Stationery	63
Federal taxes	100
Lumber	12

The "Lumberman Poet" in Toronto

Mr. Douglas Malloch, "The Lumberman Poet" of the American Lumberman, visited Toronto recently and delivered an address before the coal merchants of Ontario, who were then holding a convention. In his section of the American Lumberman of a subsequent issue, Mr. Malloch published the following interesting account of his impressions in Toronto and at Niagara Falls:

"The hand of the war is evident in Toronto. This city of something less than half a million people has sent sixty thousand soldiers to Europe. It is not unusual to meet a young man with an arm or a leg missing or with some other mark of the conflict. The olive-green khaki of the Canadian volunteers is also much in evidence.

"Conscription is looming in Canada, and then the labor of aiding the Empire will be much more equitably distributed. In Canada the age for registration will probably be from 20 to 45. There is the usual amount of debate and discussion, with conscription finding favor in the West and disfavor in the East.

"When the history of the war is written Toronto may look proudly to its part in it. It has given liberally of both its men and its money.

"With conscription in America already in effect, and in Canada impending and inevitable, those who cross the imaginary line find that it is very real in fact. The United States immigration inspectors have arrived at the conclusion, if the Niagara frontier is a criterion, that the way to get the best results is to be as brusque as possible. It is a well-known fact that the guilty are always prepared for rough handling but that the innocent, under such circumstances, go a mile in the air. After having been asked the same question three times in rapid succession, no American, no matter how good he may be, is prepared to deny that he is a German plotter intending to blow up the falls, or a slacker endeavoring to flee the country and ready to leave family, boarding-house, job, creditors, and all behind him rather than go to the French front. Our purpose in this fair city was to deliver an address to a naturally impatient throng at the King Edward Hotel. This crime remained undetected, but the fact that we look young for our forty troubled years came near landing us in the jug. We would suggest to Mr. Wilson that he buy a few volumes on the almost forgotten art of etiquette and send them to his personal representatives on the border."

No More Logging on Menominee River

The last log drive on the Menominee River is under way. With the completion of this drive lumbering on this river, in its time among the greatest log streams in the country, will be over. Five big sawmills will continue to operate for years in Marinette and Menominee, but the logs will come by rail and not down stream. The drive on the Pine River, the farthest north log tributary of the Menominee now, has been begun. It takes about two weeks to get the timber out of this stream into the main river and then the crew begins the long journey with the logs to the Twin cities. The drive this year will not include more than 14,000,000 feet, a little less than last year, and when the logs reach the booms the Menominee River Boom Company's activities after more than fifty years of life, will be practically over. During that time between ten and twelve billion feet of lumber was brought by this concern down the Menominee. One year the total amount sorted was between 600,000,000 and 700,000,000 feet. At that period Marinette and Menominee were the greatest lumber producing centers in the country. The N. Lundington Company, the last concern to log on the Menominee, cut its final growth of pine last winter and all its timber will come in by rail hereafter. The Sawyer-Goodman Company has no more timber on the river and the Menominee lumber companies some years ago quit river logging.

Michigan Camp to Consume 26,000,000 Feet of Lumber

The National Army Cantonment at Battle Creek, Mich., will require over 26,000,000 feet of lumber or 1,325 car loads. The contract for the construction of the cantonment has been obtained by Porter Bros., general contractors, Portland, Oregon, who have a large branch office in Detroit. They report that all the lumber required will be purchased in Michigan. Construction work is to start at once. The contract covers 2,000 buildings of various sizes and calls for an expenditure of more than $3,500,000. The cantonment will be built on a 900 acre tract four miles west of Battle Creek and is designed to house 40,000 troops. The Government desires to have it completed by September 1st. The contract also calls for 30 car loads of railway ties and other timber for five miles of side tracks; also 10 car loads of electric light poles. The camp will be built under the direction of Major M. J. Whitsun, of the United States Engineering Corps.

An active industry in British Columbia is the supplying of ship knees for the many craft that are being built at Victoria and Vancouver. The knees are huge brackets about four feet long and twelve inches square, and are obtained from trees with good solid roots, the angular junction of the root and the trunk being used. Three hundred knees are used for each ship.

The Enquiry Corner

Answers to Questions by Readers
Can We Help You?

Extent of Canadian Lumber Industry

Editor Canada Lumberman:

We would like you to give us some acts or estimates regarding timber and lumber in Canada, and also in Ontario. What is the total amount in feet and dollars of the whole lumber and timber trade in the Dominion? How does the extent of the trade in dollars compare with that in iron and steel? How many employees does it take to run it, both as regards the Dominion and Ontario? Is the supply of available timber becoming less? Do you think the timber trade and lumber industry will improve after the war? Can you give us an estimate of the probable amount of lumber used in Toronto and Hamilton?—Lumberman.

No definite statistical information is available which gives the actual amount or value of the lumber and timber trade of Canada. The nearest thing to it is contained in the annual report of the Forestry Branch of the Department of the Interior for the year 1911, which estimates the volume and value of the trade. This estimate is expressed in "cubic feet of wood cut in the forests," and includes lumber, lath, and shingles, firewood, poles, posts and rails, pulpwood, hewed ties, cooperage, round logs exported, round mining timber, square timber, tanning materials, and miscellaneous products, the total of which was 2,896,000,000 cubic feet, valued at $166,000,000. The figure as to the quantity used, however, refers to "material cut in the forests," only about one-half of which is ever actually put to use.

According to the census of 1911 (Volume III., Manufactures, page VIII.), the value of the "iron and steel products" for the year 1910 was $113,640,610, while the value of "timber and lumber and remanufactures" was considerably more than one-half as much again, namely, $184,630,736.

According to the census of 1911, the number of persons engaged in "forestry" was 42,914. This includes managers and foremen of lumber camps, river drivers, shantymen, office employees, and woodsmen of other descriptions. In "manufactures of wood" 79,793 persons were employed. This included employees in box and fruit basket manufactories, cabinet and furniture makers, cooper and stave makers, saw and shingle mill operatives, woodworkers and turners, office employees and laborers. Pulp and paper makers numbered 2,798 and carpenters 60,203. The total for all these for the Dominion was 185,708.

For Ontario the figures are as follows: "Forestry," 10,620; manufactures of wood, 31,484; pulp and paper makers, 1,143; carpenters, 19,468; total, 62,715.

Fuller particulars in regard to the above questions may be obtained, if desired, in Volumes III. and VI. of the 1911 Census, in the sections treating respectively of manufactures and occupations.

As to the available supply of timber in Canada, the situation as a whole would warrant the statement that the supply of available timber in Canada is becoming less—so much so, in fact, that the Conservation Commission is continually warning the provincial and Dominion Governments that the quantity of timber produced will have to be curtailed before many years to a serious extent unless radical measures of protection are taken both against fire and against wasteful operating methods. The greatest source of reduction in the standing timber of the country has been loss by fire. If we had only the lumbering operations to consider, our standing timber supplies would probably be sufficient for all time to come, but fire has taken an enormous toll in Eastern Canada, and our supply, notably of white pine, has been greatly reduced. On the other hand, new uses are being found for varieties of timber which formerly were not used at all, and of which we have extensive supplies, so that it is a difficult matter to say definitely how we stand to-day as compared with former days. Eastern Canada has undoubtedly lost a great portion of its timber resources. Other varieties being now used and available in large quantities are compensating to some extent for the loss.

In British Columbia the estimates available to-day indicate that the mills are able to cut only about one-fifth of the annual growth of the timber in the province, yet it would not be right to look at the matter from this point of view solely, as the operations are more or less concentrated in available districts, and it is not yet possible to remove the mature growth in all parts of the province; so that both in consumption by the mills and in reduction by timber reaching maturity which is not cut, the proportion of consumption to annual growth is increased.

In the absence of authoritative estimates and statistics regarding this subject little that is of practical value can be said.

It is impossible to say whether the timber trade and the lumber industry will be improved after the war. Opinions vary widely on this question. No one can say what conditions will prevail during the period immediately following the war, but it seems reasonable to expect that, after a period of adjustment, the demand for lumber and timber must improve because of the great number of buildings that have been destroyed in the war area, and because of the renewal of industrial uses that have been interfered with by the war. There will, of course, be a great reduction in the use of wood for war purposes, such as shell boxes, shipbuilding, wagons, railway ties, trench timbers, gun stocks, etc., but many men whose opinions are widely accepted believe that these will be far more than offset by the new industrial demand and by the demand for the rebuilding of the ruined war area.

We have no means of estimating the amount of lumber used in Toronto and Hamilton. The only way to get at this would be to have all of the retail firms and those which sell stock to large contractors, manufacturers, etc., furnish statements of their deliveries during a given year, and we fancy that only an official armed with government authority would be able to obtain figures of this sort that could be depended upon. The government has never published anything of this nature.

Estimated Values of Forest Products in Canada, 1912-1915

Variety of timber.	1912.	1913.	1914.	1915.
Lumber, lath and shingles...	$84,000,000	$71,000,000	$67,500,000	$69,750,000
Firewood	50,000,000	55,000,000	60,500,000	60,650,000
Pulpwood	12,000,000	15,000,000	15,500,000	15,750,000
Posts and rails	10,000,000	10,000,000	9,500,000	9,000,000
Cross-ties	8,000,000	9,000,000	9,000,000	3,500,000
Square timber exported	1,900,000	500,000	400,000	480,000
Cooperage	1,700,000	1,900,000	1,900,000	1,400,000
Poles	1,200,000	1,800,000	700,000	500,000
Logs exported	1,100,000	900,000	850,000	1,325,000
Tanning materials	1,000,000	20,000	22,000	170,000
Round mining timbers	600,000	600,000	500,000	680,000
Miscellaneous exports	300,000	400,000	300,000	175,000
Miscellaneous products	10,500,000	11,000,000	10,000,000	9,500,000
Total	$182,300,000	$177,120,000	$176,672,000	$172,880,000

O. M. Hennessy of Haileybury Drowned

O. M. Hennessy, manager of the Abitibi Pulp and Paper Company, and J. Lavoie, the head foreman, were drowned in the Couchiching Rapids, near Lake Abitibi. The bodies have not been recovered. The men had been missing for some days, and considerable anxiety had been felt as to their fate. A search party was organized, and the paddles of their canoe were found. Mr. Hennessy came of a family that has been connected with the lumber business on the Ottawa River for many years. He was appointed manager of the Abitibi Pulp and Paper Company six years ago, when that concern was organized. He was well known in the lumbering business in Toronto. He was a member of the Town Council of Haileybury. His eldest son, Lieut. Graham Hennessy, is now overseas.

Canadian Railways in a Bad Way

At the annual meeting of the Canadian Manufacturers' Association, recently held in Winnipeg, the report of the Transportation Committee referred strongly to the necessity for additional railway equipment in Canada.. Attention was called to the recommendation of Mr. A. H. Smith, president of the New York Central Railway, in his minority report as one of the Royal Commission enquiring into Canadian railways and transportation Mr. Smith had recommended that the Government should undertake at once to provide for an ample supply of freight cars and locomotives, against immediate and imperative needs.. The committee urged that the convention should make representations to the government to this effect.

Going After the Camp Supply Business

Although the Bowes Company, Ltd., of Toronto, have already worked up a considerable business with lumber camps, furnishing them with a varied line of their excellent food supplies, they have not gone after this class of trade in the same aggressive manner as have many other large food supply concerns. They have now decided, however, to enter this field in real earnest, and are announcing their readiness to take care of the requirements of lumber camps, both large and small. The Bowes Company, Ltd., manufacture such lines as mince meat, butter, jams, baking powder, etc., and are also extensive distributors of various other food products. They carry on a very large business as distributors of bakers' and confectioners' supplies throughout Canada, and, with their extensive buying and manufacturing facilities are in a position to cater advantageously to the lumber camps. An interesting advertisement of their lines will be found in the advertising section of this journal.

Western Operating Cost Increases

Statistics from a Number of Mills Show Remarkable Advances in Nearly all Lines of Labor and Supplies

In resent issues of the Canada Lumberman interesting figures and analyses have been published relating to the present operating costs in connection with the production of spruce lumber in eastern Canada, and comparing these costs with those prevailing before the war caused them to increase. Similar figures have been secured and published by the West Coast Lumberman in regard to the increased cost of production at Pacific Coast mills. In most cases, the figures given can be applied to the British Columbia industry, although the duty on equipment, machinery, etc., and the acute scarcity of labor in British Columbia on account of heavy enlistments for service overseas have undoubtedly made the increased cost in British Columbia even greater than in the Pacific Coast States. The figures given, therefore, may be considered as a conservative statement of the British Columbia situation.

The figures naturally show a considerable range. For instance, steel and iron, which include tool steel, have in some instances advanced as much as 500 per cent., as well as steel and iron castings. Wire rope shows a considerable range. The standard lines have advanced approximately 125 per cent. but the exigencies of the times have brought forward new brands, and many used lines and a corresponding medley of prices. The concensus of opinion is that while the wage item has advanced there has been a simultaneous falling off in efficiency. One mill, which has analyzed its operations very closely, and whose report is one of the most illuminating and valuable ever compiled and published, and which is shown independently, calls attention to the fact that in May, 1915, the plant employed 190 men, whereas in May, 1917, the average number of men employed was 230, and the men were doing the same amount of work. The actual wages per man during May, 1917, showed an increase of 39 per cent., and a decrease of 14 per cent in efficiency, or a total increase of 53 per cent. in labor cost.

This mill summarized its operations as follows:

	1914.	1915	1916.	First Quarter 1917.
Manufacturing cost including supplies.	$ 5.12	$ 4.64	$ 5.66	$ 7.69
Average selling price	11.58	12.45	14.39	15.41

One Oregon mill writes: "Our operating costs, including camp and mill, have jumped up $3.50 per M."

Below is a table showing the percentage of increase in twenty-six commodities in general use in one company's operations:

Items	Increase Per Cent.
Steel and iron	100
Wire ripe	150
Belts	25
Saws	33 1/3
Lubricating oils	10
Shaftings	100
Waste	100
Steel castings	85
Brass castings	150
Nails	200
Tool steel	500
Planer knives	150
Saw teeth	50
Axes	50
Pipe and fittings	100
Hams	85
Bacons	70
Flour	200
Sugar	50
Beans	300
Rice	100
Cereals	40
Syrups	25
Canned fruits	50
Canned vegetables	100
Dried fruits	50
Skilled labor	20
Common labor	50

The following is a comparison of eight items of mill supplies bought during the first half of 1915, as compared with the prices now in effect:

	1917	1915	Advance
Head band saws	$ 3.83 per ft.	$ 5.53	44%
Oats	37.50 per ton.	58.00	55%
Hay, No. 1 Timothy	17.50 per ton	35.00	100%
Mild steel	2.00 per cwt.	5.25	162%
Leather belting	1.17 per lb.	1.68	43%
Tool steel, 1 in., October	.08 per lb.	.14	75%
Lath yarn	.09 per lb.	.21¼	136%
Waste	.09½ per lb.	.15	58%

An average advance in the eight items above of 83 per cent.

The same company's wages during April and May in each of the last four years averaged as follows:

Average daily wage for April, 1914	$2.59
Average daily wage for April, 1915	2.45
Average daily wage for April, 1916	2.79
Average daily wage for April, 1917	3.17
An increase of 29 per cent.	
Average daily wage for May, 1914	$2.59
Average daily wage for May, 1915	2.45
Average daily wage for May, 1916	2.84
Average daily wage for May, 1917	3.42
An increase of 39 per cent.	
Average number of men on plant May, 1915	190
Average number of men on plant May, 1917	230
Doing same work.	

The following tables give a comparison of the labor efficiency of March, 1915, and March, 1917. These figures are considerably in favor of March, 1915, as a large proportion of cut to shipments is in March, 1917.

March, 1915—	
Cut	4,154,022 ft.
Sales	3,977,112 ft.
Average	4,065,567 ft.
Number of man hours worked	52,872
Man hours per M. cut and sold	12.96
March, 1917—	
Cut	4,317,874 ft.
Shipments	3,631,423 ft.
Average lumber handled	3,974,648 ft.
Number of man hours worked	58,932
Man hours per M. cut and shipped	14.81

Taking March, 1915, as 100 per cent. efficient, March, 1917, would show an efficiency of about 86 per cent. There is, however, a large proportion of high priced manufacturing in 1917 as compared with the cheaper shipping costs. March, 1917, is, therefore, somewhat less than 86 per cent. efficient as compared with March, 1915.

From fourteen mills reporting, the following spread of increased costs is reported:—steel and iron, 75 to 500 per cent.; ropes, 50 to 300 per cent.; locomotives, 50 per cent.; saws, 33 to 100 per cent.; shingle bands, 50 per cent.; sawmill machinery, 15 to 30 per cent.; labor, 33 to 85 per cent.; commissary, 20 to 500 per cent.; belts, 25 to 100 per cent.; general hardware, 25 per cent.; oil, 10 to 100 per cent.

Shipbuilding at St. John, N.B.

A St. John, N.B., despatch states that Mr. H. C. Schofield, a prominent shipping man of that city, has obtained a contract from the Imperial Munitions Board for the construction at St. John of two wooden steamships of 2,500 tons each, with sail power and auxiliary engines, similar to the vessels described in the Canada Lumberman of June 1. It was necessary to get a change in the specifications drawn up by the Munitions Board, so that native timber could be substituted for imported kinds which are not easily available. A shipyard will be established at the head of Courtenay Bay, where years ago a great wooden shipbuilding industry flourished. While the first ship is being built materials for the second will be assembled, and it is hoped a permanent industry will result. It is also announced that arrangements are being perfected by a private company to build vessels of another type and smaller tonnage.

Cardinal and Page Open Office at Montreal

Messrs. Cardinal & Page have opened an office at 180 St. James Street, Montreal, as wholesale dealers in lumber and pulp. Mr. H. Cardinal was formerly a partner in the firm of Cardinal & Delorme, retail lumber merchants, Montreal, and Mr. O. Page was for the past five years in the wholesale department of the McLennan Lumber Company, Montreal.

Proposal for Government Control of U.S. Paper Mills

The United States Federal Trade Commission, in its report upon the high price of news print paper, suggests that the government should take over the control of all mills producing news print paper, book paper, ground wood and chemical pulp, declaring that this is absolutely necessary in order to bring about the sale of these grades of paper at a reasonable price and to ensure equitable distribution. This proposal is made in a preliminary report presented by the commission to the United States Senate, and would involve the appointment of a governmental agency to attend to the equitable distribution. It is also suggested that, in order to make the proposal a complete success an effort should be made to induce the Canadian Government to take similar action in connection with mills in Canada.

The Federal Trade Commission's report states that the consumption of news print paper in the United States in 1916 amounted to about 1,775,000 net tons, valued at more than $70,000,000, and that at the prices now prevailing this tonnage would cost news print consumers in 1917 more than $105,000,000, an increase of $35,000,000, or 50 per cent. This increase would fall upon newspaper publishers, and if the advanced cost of manufacture in 1917 over 1916 is estimated at $10 per ton, the report states that one-half of the $35,000,000 increase in the cost of paper would represent additional profits to the manufacturers.

Of course, the proposal made by the Federal Trade Commission does not in any way involve that the idea will be put into practice. It is simply a recommendation to the Senate, and may, or may not, be adopted. At present opinions seem to be considerably divided in regard to the feasibility and justice of the plan. The paper manufacturers are vigorously opposed to it. The newspaper publishers, through their special representative, Mr. A. G. McIntyre, have issued a statement to the effect that their paper committee have not yet taken any official action in the matter, but will unquestionably support the proposal, if it is developed by the Senate and Congress on such a basis that it will not affect or deter the development of the news print industry in the United States. Some of the leading newspapers of the United States have come out strongly in opposition to the proposal, claiming that it would be so extraordinary an extension of government control over private industry as to be a dangerous precedent, and that it involves so many harmful possibilities that they trust the necessity of accepting the recommendation will be removed through some voluntary action on the part of the manufacturers of print paper and through agreements with the publishers that shall be mutually satisfactory and advantageous. Canadians are likely to look upon this proposal, as far as possible, from a disinterested and an outsider's point of view. The intricate relations between the paper-producing industries in the United States and Canada and the fact that much of the Canadian product is consumed in the United States, however, will make it a difficult matter for Canadians to treat a proposal of this sort in an indifferent manner, if it is carried out. In Canada the government has already regulated the price of print paper for a short time, and a government commissioner is investigating the paper situation, with a view to making such recommendations as are required, in order both to develop the industry and to ensure a sufficient supply for the newspapers of Canada. Under these conditions it is scarcely to be expected that the Canadian Government will fall in with any suggestion of this nature until its own commission has made a final report. The whole situation is extremely important and interesting, and developments, which are likely to come quickly, will be watched closely by all who are intimately concerned.

New England Forestry Battalion in England

The battalion of New England lumbermen referred to in a recent issue of the Canada Lumberman, which comprises 10 complete portable units with full equipment and skilled workers, has arrived in England. The men sailed from an Atlantic port on a British transport and were given a great send-off by the lumber trade and other public spirited men whose generosity made possible this substantial assistance to the allies.

The men were entertained shortly before their departure at a banquet at the Boston City Club A number of splendid addresses were delivered after the banquet. Governor McCall, in presenting the mill units on behalf of the New England States, to the Hon. Thomas Hohler, Councillor of the British Embassy, commented upon the fact that a new distinction was Boston's on this occasion. "This movement," he said, "is understood by but few people. The question has been asked: 'Why should we send millmen to Europe? What has that got to do with the war?' My answer is that it has everything to do with the war. It means comfortable buildings erected for the wounded back of the lines; it means the rapid restoration of the bridges necessary for military strategy; it means trenches lined with wooden sheathing which will obviate to a great extent the unpleasantness of mud; it means the accomplishment of work for which the allies have neither available nor trained men.

"There is no body of men who will contribute more to the success of the allied cause than you whom I see before me, and I think that you should feel that you are as much America's contribution to the war as if you wore a uniform and carried a gun. I trust it will not be very long before we can welcome you back again to the shores of America."

In accepting the units in behalf of England, Mr. Hohler described them as "New England's most splendid gift to Old England and one that will do much to bind the countries together as never before in the world's history."

It is a wonderful change in the history of North America and of England that has made possible the sending forth of the first unit for service in France in behalf of Great Britain and the allies, from the port of Boston, which nearly a century and a half ago was the scene of the "tea party" which was the prelude of the American revolution.

Lumber Firms Prepared to Furnish U. S. War Needs

The lumber committee of the advisory commission, Council of National Defense of the United States, estimates that 2,000,000,000 feet of lumber may be used for purposes directly connected with the war in the next twelve months. The committee is given to understand that provision will be made at each camp for anywhere up to 40,000 men, instead of the 25,000 originally planned. This may be due to the decision to call for 125,000 men to serve as a reserve for the first 500,000 men drafted for the new national army. Second in quantity of lumber required comes the wooden shipbuilding program, which the committee estimates will require about 400,000,000 feet of lumber.

In a statement the committee says: "The best estimate that can be made of the total amount of lumber required for purposes of national defense within the next twelve months is 2,000,000,000 feet. This sounds like a colossal figure, and it is a big figure, but should give no apprehension that it will disturb the markets or cause a shortage of lumber. Actually this will not exceed five per cent. of one year's lumber production of this country."

Other lumber requirements will include: Structures for training camp purposes for the navy, 200,000,000 feet; aviation school cantonments, 120,000,000 feet; erection of 200 buildings at army and navy training camps by the war work council of the Young Men's Christian Association, 6,400,000 feet; packing boxes and crates for the army and navy at least 200,000,000 feet; army wagons, 25,000,000 feet; gunstocks, 10,000,000 feet; material for 3,500 aeroplanes, 3,500,000 feet.

Army cots, tent poles, automobiles, artillery, cooperage, furniture, docks and piers, trench lining, saddles, mine timbers, tools, railroad construction and the lumber necessary in building factories will help to swell the total.

The special committee representing the Southern Pine Association, acting for the Southern Pine Emergency Bureau, announce that an order for 100 ships, to be sawed by the southern mills, has been placed by Gen. George W. Goethals, general manager of the United States Shipping Board Emergency Fleet Corporation, at an average price of $35 a thousand feet at the mills. The Southern Pine Association has asked those mills which can do so, to manufacture the timbers required for wooden ships, and a large number of them have bound themselves to furnish complete schedules at the prices named, for delivery at such shipyards as may be designated by the Government. General Goethals has accepted this proposition, to the extent of 100 units (ships), comprising approximately 140,000,000 feet of lumber.

"Sawdust Facts"—A Mershon Band Resaw Booklet

William B. Mershon & Co., Saginaw, Mich., have published an interesting booklet, entitled "Sawdust Facts," which is devoted to descriptions and other useful information regarding band resaws, and particularly those produced by William B. Mershon & Co. The booklet contains an insert, with illustrations and brief descriptions of their extensive line of band resaws, and also useful information regarding their operation. Readers who are interested may obtain copies of the booklet by writing to the company.

HAMILTON
Steam Tension Band Mill
Single and Double Cutting

Special Features of this Band Mill:

(1) Tension on saws maintained by steam—quickest and most sensitive form of tensioning yet devised.
(2) Unbreakable saw guide raised and lowered by steam—**first used on our machine.**
(3) Great saving in saws—actual tests have proven saws have a longer life on this machine.
(4) Both top and bottom wheels instantly aligned by screw adjustment.
(5) Takes saws 12 in. to 14 in. wide.
(6) Heavy, rigid, strong and accurately built throughout.
(7) Built by expert workmen in a plant that has been manufacturing high grade sawmill machinery for sixty years.

May we send you a list of satisfied users?

William Hamilton Company, Limited

Peterborough, Ontario

Geo. H. Jameson, Vancouver, B.C. Agents J. L. Neilson & Co., Winnipeg, Man.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) $2.10 per inch, each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Maple and Birch

Wanted several cars 4/4 No. 1 Common Maple and Birch; also few cars of thick stock, either dry or this year's cut. Box 583, Canada Lumberman, Toronto, Ont. 11-14

Wanted

Wanted second-hand timber, Fir, Spruce or Pine. State condition and price. Box 593, Canada Lumberman, Toronto, Ont. 12-15

Poplar, Birch and Maple

Wanted a large quantity of:

1 in. log run Poplar.
1¼ in. log run Poplar.
1½ in. log run Poplar.
2 in. log run Poplar.

Also 2 in. Birch and 2 in. Hard Maple. State quantities and prices for dry or new cut. J. H. Jones, Thamesford, Ont. 12-13

For Sale–Lumber

Lumber For Sale

300,000 ft. B.M. 1 x 4 and up Clear and No. 1 Spruce.
400,000 ft. B.M. 2 x 4 to 2 x 10 Spruce.
Piled widths and lengths separate.

GEO. C. GOODFELLOW,
c Montreal, Que.

For Sale–Machinery

For Sale

One No. 5 C. B. Rogers 15 x 6 S. H. Planer and Matcher, with countershaft and:
1 pair 1 in. Shimer Flooring Heads.
1 pair 1 in. Shimer Shiplap Heads.
1 pair 3 in. Shimer Flooring Heads.
1 pair 4 in. Shimer Jointer Heads.

The Bertrand, Lockhart Lumber Co., Ltd.,
13-14 Port Arthur, Ont.

For Sale

One second hand sixty horse power return tubular boiler. Apply P. O. Box 669, Haileybury, Ont. 13-13

Shingle Mill For Sale

One new upright shingle mill with edger for sale. Apply to A. Duquette, Papineauville, P.Q. 13-13

Machinery For Sale

16 in. x 38 in. Wheelock Engine.
New Berlin Swing Saw.
24 in. Pony Planer.
Leather Driving Belt, 62 ft. 3 in. x 22 in., double.
No. 3 Jewel Dynamo Engine.

R. LAIDLAW LUMBER CO.,
11-14 Toronto, Ont.

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

A PRACTICAL LUMBERMAN, forty years old, with twenty years' experience, is open for engagement June 1, 1917. Last ten years with very large Canadian firm as superintendent and sales manager. Best of references. Box 496, Canada Lumberman, Toronto, Ont. 2-16

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

WANTED MAN to take charge of Planing Mill. One who is capable of setting up machines, filing and grinding pattern knives. Address Drawer F., Sarnia, Ont. 13-t.f.

WANTED DEPOT CLERK for Ottawa Valley lumber firm for Northern Quebec Depot, fifty miles from railway. State age and give references as to previous experience. Good position and steady employment for the right man. Box 591, Canada Lumberman, Toronto, Ont. 12-13

Business Chances

For Sale

Timber Limits and Sawmill, estimated fifteen million feet of hardwood and ten million feet soft woods. Sawmill capacity 25 M. feet, shingle mill 125 M. Docks, tug, booms, logging outfit, houses, etc. Price $35,000.

The Manitoulin Lumber Co., Ltd.,
11-22 Walkerville, Ont

Sawmill For Sale

Complete Sawmill for sale, cheap and easy terms. Capacity 20,000 feet per day. Field Lumber Company, Limited, Field, Ont. 11-t.f.

Jobbers Wanted

We wish to let several contracts to take out logs on Berth No. 6, being broken front lying between the Magnetawan and French Rivers. This berth is all convenient to Canadian Northern Railway.

John Harrison & Sons Company, Limited,
Saw and Planing Mills,
9-t.f. Owen Sound, Ont.

Mill Plant and Limits For Sale

43 Miles Limits on 31 Mile Lake, Gatineau Valley, containing Basswood, Spruce, Fir, Pine, Cedar, Birch, Maple and Pulpwood.

New Waterous 8 ft. Improved Double Cut Band Mill complete. Steam Alligator, Boats, Sleighs, Wagons, Harness, etc. For further particulars apply to

A. W. STEVENSON,
P. O. Box 2624,
8-t.f. Montreal, Que.

Miscellaneous

For Sale

Biggest snap in British Columbia, five square miles License Timber, estimated fifty-eight million feet and forty-one thousand cedar poles. Two miles to Railway and River. Price $1.50 per thousand, or $40,000 cash. Other timber available. Write owner.

W. MARK DeCEW,
12-13 Grand Forks, B.C.

PROVINCE OF QUEBEC

Department of Lands and Forests

Quebec, 2nd June, 1917

Public notice is hereby given that, in conformity with the law, on the 21st of August next, at 11 o'clock a.m., at the office of the Minister of Lands & Forests Dept., Quebec, there will be offered permits to cut timber on lands belonging to the Crown in the Upper-Ottawa, Lower-Ottawa, St. Maurice, Lake St. John, East and West, Saguenay, Rimouski West and Bonaventure West agencies, comprising several large blocks in the Abitibi, Upper-Ottawa and head waters of the St. Maurice and Gatineau and on River Chamouchouan.

Permits will be adjudged to the highest bidder.

The price of adjudication is payable in 3 equal instalments.

The permit to cut will be subject to the ordinary conditions of the Law and Regulation and the grantees of any of the aforesaid territory must, within a delay of three years, manufacture, in the province of Quebec, with the timber cut in said territory, either pulp or paper in the proportion of ten tons per day, or sawn lumber in the proportion of ten thousand feet board measure per day, per hundred square miles.

Further information may be had by applying to the Department of Lands & Forests.

Elzear-Miville Dechene,
Deputy-Minister,
13-16 Dept. of Lands & Forests.

A Miracle in France

Thanks to the genius of the French race, and its indomitable industry, it is hoped that large numbers of the fruit trees which the Germans did their best to destroy, and in many cases succeeded in destroying, may be saved. Mr. Hy. Wood, the special correspondent of the United Press of America with the French Armies, tells in a despatch how this "miracle" has been wrought. Throughout the entire district devastated there were thousands of trees that the close pursuit of the French prevented the Germans from cutting down completely. Instead the kultured tree-killers cut off a circle of bark which, with a few days' exposure to the sun would have been enough to kill them.

These trees presented the easiest problem. The wounds were bound up by thousands of army surgeons, and Red Cross ambulance drivers and stretcher carriers assisted. The circle was first covered with a special grafting cement, and the entire wound then carefully bandaged, often with bandages prepared for human limbs. Tar was used for the work, and finally even a loamy clay. In the end it was found that moss, twisted and tied about the dressed wound, was as effective as anything else. A much more serious problem presented itself where the trees had been cut down. But here French genius also solved the problem. The stumps, protruding usually two or three feet from the ground, were first trimmed off so as to conserve the sap. This stump was then treated with the grafting paste and carefully bandaged till the tree lying at the side budded from the sap that remained after being cut down. Branches that showed great numbers of buds were then cut off and grafted into the prepared stump. Today these grafts are in full leaf and blossom, and years have been saved in restoring the cut-down orchards.

Last Upper Mississippi Log Drive

The last big log drive on the upper Mississippi river is now on its way to the mills at Minneapolis, according to R. H. Chute, secretary of the Mississippi & Rum River Boom Company. "When the last of the drive is brought in next summer, the river will be clear of logs, except for dead-

heads, which are yet to be raised from the bottom. These logs can not be driven but will probably be sawed at small mills along the river."

The rear of the final drive is expected to reach Brainerd or Little Falls before the river freezes up in the fall and will be ready for sawing early next spring. The logs in this drive will keep the mills going through next summer but the activity thus developed will undoubtedly be the final windup of one of the most important industries in the early history of the city.

In commenting on the prospects of the closing of sawmill and logging activities in Minneapolis, Caleb D. Dorr, pioneer resident, and at one time boom master, said: "In the early days a log drive was about the biggest and most important thing to be had in this part of the country. It seems hard to believe that this is the last one. If I am physically able I hope to go up to the mills some day before it is over and see the logs come in."

Foresters Find Carbonized Spruce

A very interesting deposit of carbonized wood, principally Sitka spruce, was recently found by a party of timber cruisers headed by Blaine H. McGilcuddy, a former student at the College of Forestry, in a slide on the ocean beach at Camp Creek, near Talolah, Wash. The coal was used as fuel for several days and readily burned in a camp fire, leaving very little ash. Specimens submitted to the College of Forestry indicate that the deposit consists of spruce so perfectly carbonized that even the microscopical details of the woody structure are almost entirely intact, a condition which is very rare in coal measures. The extent of the deposit has not been definitely determined, though the possibility of the existence of high-grade coal fields in this region of the state seems to be indicated. The specimens have been added to the museum collection of the College of Forestry.

U. S. Building Wooden Warehouses

Lumber requirements of the United States Government to meet the nation's war needs will be materially increased as a result of the decision of the storage committee of the Council of National Defense to build at each army camp a warehouse 100 feet wide and 1,000 feet long. A number of great storage warehouses are also to be constructed at tidewater. The government has let it be known that it will expect the quickest possible deliveries for all materials, and the facilities of mills and railroads will be taxed to the utmost.

It is reliably reported that each ship yard is planning to build from three to six boats simultaneously and they want the material for each boat to arrive at the same time in the following order: Keels, framing, planking, decking and interior stuff.

Some of the contracts announced for wooden ships for the government include: Sloan Shipyards Corporation, Seattle, Wash., 16 wooden ships; Gray's Harbor Motor Ship Corporation, Aberdeen, Wash., 4 wooden hulls; Cust Shipbuilding Company, Portland, Ore., 4 wooden hulls; Terry & Brittian, New York, 20 composite steamers complete; Skinner & Eddy Corporation, Seattle, Wash., 6 steel steamers; Merrill-Stevens Company, Jacksonville, Fla., 12 cargo-carrying steamers complete; 4 steel composite steamers; Los Angeles Shipbuilding and Dry Dock Co., Los Angeles, Cal., 8 cargo-carrying steel ships complete; G M. Standifer Construction Corporation, Portland, Ore., 4 wooden cargo vessels complete.

England Planning After War House Building

The English Government and such organizations as the National Housing and Town Planning Council are actively considering the problem of building in Great Britain after the war. At a recent meeting between government officials and a deputation from the National Housing and Town Planning Council to discuss building projects it was stated that the government would probably be called upon to furnish £20,000,000 to help in the actual building, according to the Timber News of London. It was further estimated that 160,000 houses would have to be built each year during the ten years following the war. This gives some idea of the magnitude that the importation of lumber into England is likely to attain.

Flight-Lieut. Bigwood Killed in France

A cable despatch received by Mr. W. E. Bigwood, of Graves, Bigwood & Co., Toronto, on June 28, from the British War Office, stated that his son, Flight-Lieut. Paul Herrick Bigwood, of the Royal Flying Corps, has been killed in action in France. Lieut. Bigwood went overseas with an infantry battalion and later was transferred to the Royal Flying Corps, serving in France as an aviator only a short time. He was twenty-one years of age.

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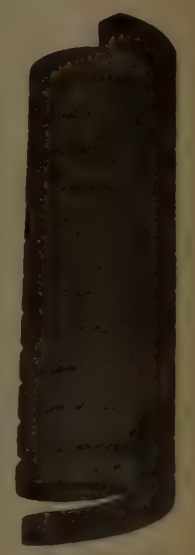
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Review of Current Trade Conditions

Ontario

The lumber trade in Ontario continues fairly active. Enquiries are good for many lines, particularly for stock for export to the United States. The activity in this line, which developed recently on account of the possibility of the United States imposing a 10 per cent. duty on imports, has continued, in spite of the fact that the Senate has killed the duty proposal. Wholesalers are now expecting that the United States will be extensive buyers of Canadian lumber during the balance of the present year. The United States Government will take all the low-grade yellow pine it can secure, and the effect will be an improvement in the demand for Canadian lumber. Stocks offering at Ontario mill points are very light, nearly everything appearing to have been contracted for already. There is a good demand for spruce lath, and prices are strong.

Shipments are fairly good, with the exception of those going through the Niagara frontier to the United States, congestion on the railways making it difficult to send stock forward.

The local trade in Ontario is encouraging. Hemlock is strong throughout the province. The Western Ontario demand is exceptionally good. Much of the stock moving is on shell box account, although builders are buying a little more lumber than they were a short time ago. The general industrial demand is also good, particularly for the agricultural implement and car trades. Good cutting-up lumber and good sidings are very scarce. One and a half to two-inch are practically off the market. Collections generally throughout Ontario are reported good.

Hardwood market conditions are changing so rapidly that it is difficult for the trade to keep in touch as fully as it should. A number of mills are now manufacturing quite a quantity of No. 2 common in their thicker stock, and there is a tendency on the part of the trade to buy some of this, so as to reduce their costs. How successful this experiment will be remains to be seen. Possibly the trade will take it, and, again, it is quite possible that they will not. With the prices such as they are to-day, it is reasonable to expect that the trade will make up their minds to use this line of stock.

Probably there never was such a shortage of basswood in Canada and the United States as there is to-day. No one ever seems to ask what basswood is worth, but simply whether it can be obtained. This has been caused almost entirely by the fact that, comparatively speaking, there has been practically no basswood taken out this year.

Prices of practically all hardwoods have been advancing steadily of late. This is attributed to the great shortage of stocks and the large demand that exists. Buying of hardwoods for United States army purposes is on a very large scale.

The situation in connection with the export trade is commencing to look somewhat more promising. Those who have been following it closely report that available supplies of home timbers in Great Britain and France are badly depleted and that a renewal of buying in America is not unlikely. The influence of the forestry battalions in Great Britain and France is expected to be favorable to the export trade in hardwood when the demand again develops. In an indirect way their operations are counted upon to improve the export demand. The manufacturing methods of the forestry battalions are said to be so superior to those prevailing formerly in Great Britain and France that it is probable that new buying methods will be adopted and that importers in those countries will in future be less inclined to take thick lumber and do their own sawing. Instead of this they will realize that, in order to get the best out of the log, they should buy definite sizes of stock on the American grades.

Eastern Canada

Conditions remain practically unchanged in the lumber trade at St. John, N.B. No stocks have been moved for export during the past fortnight, with the exception of about 1,000,000 feet taken by transports. The result is that the mill yards are rapidly filling up. No new English sales are reported, and few are expected while the embargoes continue. A slight easing off is reported in the American market, but enquiries continue plentiful.

Spruce boards continue firm. There is a scarcity of low-grade or refuse lumber, and prices are firm. Reports from Nova Scotia indicate improvement in the American demand for scantling, boards, and laths. Present indications are that on account of the lack of tonnage a large quantity of deals will remain over unshipped this season. Many mills are sawing their logs into planks, for which there is a good demand in some parts of the United States.

A fair volume of business is reported from Montreal, but orders have shown a slight falling off. Improvement in the car service is reported, and stocks are moving more satisfactorily. Prices are firm in all lines. The United States demand continues strong, particularly for hardwoods, and the outlook is for a continuance of these conditions for some time to come. Dimension timber is quiet, but there is a good enquiry for British Columbia stocks for shipbuilding purposes. Exports to the United Kingdom are very light, and practically all on government account. A small quantity of stock is going forward to South Africa. A better movement of stock for export is reported from Quebec and lower ports, some being loaded for the French Government.

Spruce dimension is a little less active at Boston, but prices continue firm. Important orders are being placed with spruce manufacturers by government agents, and some manufacturers are looking for still higher prices. The War Department is expected to buy 25,000,000 feet at an early date, to be used for army buildings. The general belief is that the demand resulting from the war will more than offset the lack of dwelling house construction. Quotations for random are a little easier, New Brunswick manufacturers having commenced to seek an outlet for stock that they are unable to ship to the United Kingdom. A firm market is reported for boards, which is expected to continue until shipments from the South can be resumed on a heavy scale. Hardwoods at Boston are very firm, and the demand is good. Great difficulty is experienced in obtaining stocks. Hemlock is somewhat firmer at Boston than it was a fortnight ago. Government purchases are expected to reduce available stocks and to create a shortage of lumber for building purposes. The demand for shingles at Boston is a little higher, but shipments are more difficult to obtain and prices are steady. Bad weather and the higher cost of materials have reduced the building construction demand. Some of the large producers have withdrawn quotations until they can catch up with orders. Lath are not quite so firm, and the demand is light.

House building operations in the New England States are practically nil. The demand for manufacturing purposes is fair, and there is only a slight demand for sash, door, and blind factory products.

United States

Trade conditions in the United States seem to be rather disturbed, no doubt on account of the general readjustment period through which the country is passing on account of the war. Building permits for the month of May showed a decline of from 30 to 35 per cent. as compared with May, 1916. The greatest loss was in New York City, where it amounted to 77 per cent. Extensive decreases were also reported from Chicago, Philadelphia, and most of the other large cities. The retail trade in general is experiencing less activity.

The yellow pine industry is still suffering on account of the inability of the railroads to handle their shipments. Many mills are still out of the market, and purchasers who want heavy structural timbers are experiencing great difficulty in locating mills that will undertake to furnish them. The government business is increasing daily, and for this purpose cars are as plentiful as the conditions require. Prices continue firm, and in many cases show an upward tendency. The demand for white pine continues as heavy as ever, and stocks at Northern mill points are inadequate. The demand for white pine is particularly strong in the East, where embargoes have curtailed shipments for so long that stocks on hand are now very low. White pine prices are firm. The hemlock market is strong, the demand being good and stocks light. Prices continue to advance, and the general belief is that the volume of trade will continue at the high level for some time. Manufacturers are all sold well ahead, and extensive orders from the government are expected. Much stock is being shipped in a half dry condition to meet the demands of urgent customers.

The demand in the fir trade continues strong and active. Many mills are refusing to quote on prospective orders, as they have so much business still left to clean up. The car situation on the west coast has improved in several shipping districts, and the volume of shipments has almost become equal to the normal production.

The hardwood trade is very active in all districts where government business is being placed, but the demand from retail dealers and factories is showing a decrease, as is usual at this time of year. Manufacturers are thus obtaining an opportunity to catch up on shipments. Improvement in the car supply is reported, particularly in the northern districts. Stocks are not large in the hands of manufacturers, factory

View of Mills in Sarnia.

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consumers, or retailers. Prices everywhere are firm, and are governed almost entirely by the ability of the shippers to fill orders promptly.

Great Britain

The lumber trade at London continues active. Case makers have so many orders for immediate delivery that they are fully employed, and are searching everywhere for available stocks. Although the home supply is coming in more freely now than formerly, it is far from sufficient to meet the requirements of the trade, and imported stock is being drawn upon heavily. While fresh arrivals are very light, the trade is hoping that the recent change in the office of controller of timber supplies may lead to favorable action in the direction of permitting the importation of wood goods. Undoubtedly such a change is needed, and prompt action would be greatly welcomed so as to avoid the shortage which is certain otherwise to develop in the very near future.

The Liverpool trade is somewhat encouraged by the recent decision of the government to permit the importation of Scandinavian goods under license whenever occasion requires. This is a welcome change in the government policy, and importers are hoping that it will be followed before long by a similar removal of the restrictions against importations from Canada, where suitable stocks are available. Although the transportation difficulties in connection with Canada are much greater than those in connection with the Scandinavian trade, it is not unreasonable to hope that an opportunity will be given before long for importations from Canada.

Manchester dealers have had to tackle the English-grown stock to a greater or lesser degree, although naturally they prefer to deal in the imported goods because of their greater suitability. It is reported that prices of English timber are steadily rising, and that really good stocks are bringing high prices.

The first of the season's arrivals from Montreal were recently reported at Glasgow. These, however, were of very small proportions. It is expected in some quarters, however, that more space will be allotted to timber before long, and that the same concessions will be extended to Canadian goods as have been granted to Scandinavian shipments in regard to the limits of sales permitted. It is not considered probable, however, that consignments from Canada this year will be otherwise than on a very moderate scale. Some lines at Glasgow, particularly rock elm, pitch pine, etc., for shipbuilding purposes are practically exhausted, and consumers are hoping that the government will permit free importation. No move in this direction, however, is reported as yet. There is a good demand for birch plank, and as stocks are greatly reduced, prices are very strong. Lower port planks are now worth about 5s per cubic foot, and Quebec lumber about 6s per cubic foot. Very little Quebec stock is on the market, such as there is belonging to the merchants.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

St. John Mills Still Heavily Stocked

St. John, N.B., June 23.—(Special to the Canada Lumberman.)—During the last two weeks conditions have remained unchanged. Positively no lumber has been removed by tramps. During this time transports have lifted only about a million feet; the mills are being rapidly piled up. No English sales have taken place recently, and, with the embargoes, it looks as if sales would be very limited, although it is not known just when the Allies may wish to purchase further stocks. This is the only avenue which can be looked forward to to relieve the present situation.

The American market it not quite so firm as it was two weeks ago, but there are still plenty of enquiries coming into Canada. If stocks could be railed to New York, New Hampshire, and Halifax points considerable material would be moving. Boston and Maine points are not so easy to reach in some cases, and the New England market is not big enough to take care of every order, but, combined with New York it is. Prices have fallen about $2 per M. on dimension and random. Spruce boards remain firm at $22 f.o.b. St. John.

Supplies of low grade or refuse lumber are scarce, and prices remain very firm.

All the main river drives are in the booms. With water at such a pitch, no logs could remain on the shores.

Parrsboro, N.S., Trade Report—Heavier Shipments to the U.S.

Parrsboro, N.S., June 20.—(Special to the Canada Lumberman.)—The condition of the lumber trade from Parrsboro has completely changed since last year. In former years our deals found a ready market in the United Kingdom and, until some months after the beginning of the war, all shipments overseas were made in square-rigged vessels and steamers. Then came a time when the scarcity of tonnage compelled the employment of our larger schooners, but the shipments continued, and the quantity shipped was nearly as large as ever. This year not a single deal has been shipped direct to the United Kingdom, and, although the British Government bought deals here last year, to be delivered this season, there is as yet no sign of any shipments.

The lumber trade with the United States appears to be even brisker than usual, and large quantities of scantling, boards, and laths are being constantly exported. Much of this lumber is carried in American bottoms, owing to the fact that many of our largest vessels have been sold this season. The reduction of our fleet still continues, and no less than five three-masted schooners hailing from this port have been sold within the last three or four weeks. It may seem strange that ship-owners will sell their vessels while freights are so high, but it must be remembered that ship property deteriorates rapidly, and is exposed to many risks, and when owners of vessels long past their youth are offered two or three times their original cost, there is naturally a strong temptation to sell. Meanwhile the demand for tonnage is increasing, and although the new vessels which will soon be launched will do something towards relieving the pressure, yet it is probable that considerable lumber will be held over for lack of tonnage. In fact, it is fairly certain that a large number of deals will remain on hand, but there may be some unexpected changes even in that class of lumber. A large three-masted schooner has just commenced loading deals at this port for New York, and it is possible that this initial cargo may lead to a demand for more. Then, too, the lumber operators are adapting themselves to the changed conditions, and many mills are sawing their logs into planks, for which there appears to be a good demand in some parts of the United States, instead of making deals, as they have been accustomed to do. And even if a considerable quantity of lumber has to be held over next winter, there seems to be no danger of greatly reduced prices.

Montreal Markets—Trade with U.S. Active

Montreal, June 25.—(Special to the Canada Lumberman.)—Although business is good, a slight falling off in the orders received is reported. There is the same difficulty in securing from the mills the required stock in certain lines, but with the car service in much better shape, goods are coming forward in a fairly satisfactory manner. Prices are as firm as ever. The smaller orders received by wholesalers are attributed by some to the uncertain conditions created by the conscription discussion.

Purchases for the United States are still good. The representative of a Boston firm states that the lack of labor has caused a shortage in lumber, and as the demand for hardwoods in particular is very heavy, wholesalers are looking to Canada for supplies. His opinion is that the requirements for practically all kinds of wood will be very large for some time to come, owing to the industrial outlook and the extension of the shipbuilding industry.

The trade in dimension timber is on the quiet side. Many enquiries for British Columbia lumber for shipbuilding purposes have come to hand, but the extensive local demand has tended to restrict it coming east. For all that, the buying has been on an important scale, and would be even better were larger supplies available. The Imperial Munitions Board, it is understood, will not place contracts for wooden vessels unless there is an assurance that the lumber supply is assured. Some vessels in the Maritime Provinces and also in Quebec are being constructed largely of spruce, as a substitute for British Columbia fir. It is conceded that this is inferior for the purpose, but the vessels are regarded more or less as temporary expedients, and will serve their purpose to overcome the dstruction of vessels by the submarine.

The Munitions Board recently prohibited the use in Eastern Canada of British Columbia fir for ship-staging, presumably on the ground that the lumber is required on the Pacific Coast. This lumber comes in lengths up to 24 feet, and the order of the board directed the use of spruce in place of fir. Enquiries made at the chief lumber points in the Province of Quebec elicited the answer that it is impossible to obtain spruce of this length in any quantities from stock for immediate use. Had such lumber been asked for months ago it would have been forthcoming, but at this season it is out of the question to manufacture it.

Exports to the United Kingdom are on a very small scale, the

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occasional cars that are sent being nearly all on government account. Some small consignments are going to South Africa. The entire shipping is now under the control of the government. Advices from Quebec state that lumber there, and at lower ports, is moving more freely, some being loaded for the French Government. It is evident that lumber is urgently required in Great Britain, as the Secretary of the War Office has announced that, in order to ease the present stringency in the supplies of lumber as far as possible, without sacrificing more important interests, the War Cabinet has authorized the importation, under license, in neutral vessels of soft wood from the countries of Scandinavia, when it will not displace cargoes of foodstuffs or munitions.

The sulphite pulp market has undergone little change. The demand, however, is not as active as it was, say, two months ago, and prices have receded. The Riordon Company is doing a fairly good foreign business, having recently sent consignments to Spain and to Calcutta, while a quantity has also been sent to Italy. The ground wood market is steady, with a moderate demand.

New Season's Cut Now on Ottawa Market

Ottawa, June 26—(Special to the Canada Lumberman):—The Ottawa lumber market, while fairly well stocked, maintains firm prices, with a tendency toward higher levels. There is a fair demand for the various kinds of lumber, with the exception of building materials. There is considerable demand for dry lumber, but the supply is not great. The first of the green cut came to the local market last week. Prospects for logging and cutting in the bush this season appear brighter than at a corresponding period last year with some of the mills, the pulp cut being excepted. It has been reliably forecasted that the J. R. Booth interests will not have as big a cut as last year on account of the British embargo being in operation. A permit has to be secured before any lumber can be shipped to England, thus seriously curtailing the firm's large export operations.

Building operations, with the exception of the reconstruction of the Parliament Buildings, are not being carried on to any great extent, though showing a greater activity up to the present, than for a similar period a year ago. The manufacture of shell boxes, which is being carried on by many of the mills, replaces the inactivity of building materials. There is at present a scarcity of fuel supplies of wood, in comparison with the summer season of 1916. The Estate James Davidson expect to operate their Fort Coulonge sawmill for seventeen weeks this summer. Last summer it operated about six weeks. The cut of the firm this year will be large. Despite a shortage of labor, the Ottawa factory is working up to capacity, being especially busy on shell boxes, having sufficient orders of this nature to keep them going for two months.

New England Market in Peculiar Condition

Boston, Mass., June 22.—The New England market has been in a peculiar position lately. There has been a good deal of scarcity of lumber and a great scarcity of transportation, particularly from the South. The mills there have absolutely been unable to fill their orders. They cannot get cars and cannot get permission to ship. At the present time there is a hard and fast embargo on the New Haven Railroad, which takes in more than half of New England, and nothing can be shipped on to that line except to junction points, we understand. The demand for boards has been pretty strong and the supply very light. Spruce boards have been very firm in this market. We are overrun ourselves with orders for dressed lumber.

On the other hand, there has been a good deal of cessation in house-building here, and we think the ordinary retail trade to the builders is very small, but it is being replaced in a large measure by government business, box business, and lumber for the building of large plants. Factory hardwood flooring, for instance, is next to unobtainable. The Eastern mills in the United States are getting hardly orders enough for small spruce, and there is some weakening in price on spruce from Nova Scotia and New Brunswick, such as 2 x 4, 2 x 6, and other small sizes of scantling and timber.

On the other hand, there is an order just about to be placed for about fifteen million feet of lumber of one kind or another to go into a camp at Ayer, Mass., where troops are to be trained. This should set the situation right on small spruce as quickly as it is placed, which we imagine will be within the next week or sooner.

We have heard of no recent large purchases by Americans in the Canadian market, although no doubt small ones are being made all the time, as we made a few ourselves. There seems to be a feeling among the trade that prices have about reached the top, and it will be difficult to force them any higher—in fact, the average retail lumber dealer is not buying, as he feels prices are beyond his reach, and he sees little trade coming his way. White pine is very scarce and firm. The box trade, of course, is heavy. Nobody can look very far into the future, although government requirements will doubtless be large, which will keep many other kinds of business active. Some kinds of business are suffering to some extent, and the demand is changing from a peace basis to a war basis, which makes things uncertain. Labor shortage is being felt in this country about as much as it is in Canada now, and will probably be much greater when the draft goes into effect. It seems to be the ordinary common labor that is shorter than almost anything else. We think building work can be done pretty rapidly at the present time, as builders are not busy.—Lumberman.

Southern Hardwoods All in Strong Demand

The Hardwood Manufacturers' Association of the United States, in their market letter under date of June 23, say: The hardwood market continues strong and active. There never was such a demand for hardwood lumber and such scarcity of dry stocks as exists to-day. In the Eastern territory stocks are generally oversold and production is below normal, due to the acute labor situation. In the Southern territory daily rains have interfered with logging operations, and stocks are anything but large in the hands of manufacturers.

The whole tone of the market seems to be firm, and there is absolutely no diminution in the call for lumber of almost every description. Building permits for May show a decline of 36 per cent. when compared with those of the same month in 1916, and the demand from the furniture trade has slumped somewhat, but truck and wagon manufacturers, shipbuilders, and the government have entered the market stronger than ever, and have more than offset any indication of slackening in other directions.

Lumbermen are about to be called upon to face extraordinary and wholly unprecedented conditions. There has already been a heavy drain on labor resources, and the taking of a half-million young laborers from the country this summer is going to have a serious effect upon the production of lumber. Especially is this true in the South, where every mill is already handicapped by the scarcity of labor. The cost of production is increasing out of all proportion to the selling price, and this heavy burden placed on the manufacturers of lumber must ultimately be added to the selling price. When you are weary of explaining the why and wherefore of the so-called high prices of lumber, tell friend customer that lumber is no higher to-day than in 1906, while the cost of everything entering into the cost of manufacturing lumber has more than doubled.

The car situation begins to show some signs of improvement. On May 1 the shortage was 148,627 cars. On June 1 it was 105,127 cars.

There is a splendid demand in oak, both white and red, quartered and plain. The demand for sound square-edged timber planking, switch ties, freight and passenger car stock is especially good. Prices depend entirely on the character and size of the enquiry. Low-grade oak is practically cleaned up; 4/4 No. 1 common, plain, white, and red, are much stronger than thirty days ago.

Poplar in all grades and thicknesses is in fine demand. Stocks are low, with no chance for betterment. The lower grades in all thicknesses are especially strong. All thicknesses in No. 1 common are in demand. The upper grades are active and prices higher.

There is a decided shortage in chestnut stocks, and numerous concerns seem willing to take green lumber in order to secure a supply of stock. The demand for sound wormy continues strong. In fact, the demand in all grades far exceeds the supply.

Ash continues in good demand, with prices steady. The upper grades, especially in thick stock, are in strong demand and very scarce.

The demand for gum continues strong and active, with a fine demand from manufacturing consumers. There is a big demand for the lower grades in all thicknesses. Wagon box boards are active, with rapidly advancing prices. Quarter-sawed red and sap gum continues to move steadily at firm prices.

The demand for cottonwood continues strong, with the market quite firm. The lower grades are exceptionally strong as a result of the big demand therefor from box manufacturers. Wagon box boards are in good demand. Dry lumber in practically all grades is scarce.

Liverpool Spruce Deal Market

In its issue of June 9, the London, Eng., Timber Trades Journal says:—"There have been no arrivals of any weight at Liverpool since our last report, and forward business is non-existent up to the present as restrictions have not been withdrawn, and the prospect for the future is certainly not encouraging. The Government, it is understood, have bought heavily on f.o.b. terms, and already some stocks have come forward; but until they have secured all their requirements it is unlikely that private importers will have much chance of securing anything. The spot market is good so far as demand is concerned, and consumers are being strictly limited when applying for permission to buy, and in many cases are advised to turn their attention to the native woods, which, as everyone knows, are not to be had in any quantities, or with any regularity, even if suitable for their purpose,

DRIED FRUIT

If you are in need of fruits for the camp, here's a little list that may interest, and, if so, we shall be glad to hear from you.

Prunes, small size, meaty and good flavor		.9¼
3 Crown Muscatels	50s	.9¼
1 " "	50s	.9½
Spanish Select Valencias	28s	.9¼
Bulk Seeded Raisins	25s	.10¼
Fancy Evaporated Apples	50s	.14
Choice " Peaches	25s	.14½
Comadre Figs, in Serons		.5¾
Boxes Hallowee Dates		.13½

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which in the majority of cases they are not. There appears to be a good deal of complaint over the attitude of the Government's requisitioning stocks in importers' hands, as it is now nearly three weeks since they advised what they required, and as far as can be ascertained none of it has yet been inspected. In the meantime, charges are going on, and if not satisfactory on inspection the loss of interest and rent, etc., should be added on to the restricted prices, if there is any equity at all. The removal of the restrictions on Scandinavian woods will not materially help private importers to replenish their stocks at current prices, and as spruce is unobtainable there is no doubt that there will be a famine in timber unless the position alters very considerably."

Liverpool and Manchester Stocks

The following report upon Liverpool and Manchester stocks for the month ending May 31st, 1917. is furnished by H. W. Lightburne & Company, Liverpool, England, and their St. John, N.B., representative, John E. Moore & Company, Limited.

Spruce and Birch

Month Ending May 31st, 1917

Liverpool

	Import			Consumption			Stock		
	1915.	1916.	1917.	1915.	1916.	1917.	1915.	1916.	1917
N.B. & N.S. Spruce & Pine, Stds. ..	3,540	1,900	160	1,940	1,530	1,860	5,370	6,010	5,820
Birch Logs, Loads	120	0	0	220	40	120	40	360	300
Birch Planks, Stds.	73	121	0	176	133	18	67	303	200

Manchester

Spruce, Stds.	2,400	1,670	440	1,820	1,630	2,570	2,780	6,920	6,960
Birch Logs, Loads	0	0	0	60	60	120	0	480	180
Birch Planks, Stds.	0	121	0	91	121	70	103	327	363

Stocks in Manchester and Liverpool Combined

Spruce

	1913.	1914.	1915.	1916.	1917.	
Manchester	4,710	8,510	2,780	6,920	6,960	
Liverpool	3,960	5,660	5,370	6,010	5,820	
	8,670	14,170	8,150	12,930	12,780	Stds.

Birch Logs

Manchester	480	540	0	480	- 180	
Liverpool	780	640	40	360	300	
	1,260	1,180	40	840	480	Loads.

Birch Planks

Manchester	418	497	103	327	363	
Liverpool	715	443	67	303	200	
	1,133	940	170	630	- 563	Stds.

Forest Service Aided in U. S. Registration

The Forest Service of the United States made every effort to co-operate with the State Bureaus of Registration for the National army by carrying information into the remote mountain regions of the Western States. Members of the district offices and the supervisors' offices were detailed in a number of the mountain counties to aid county officials in charge of registration. Rangers and guards, mobilized for the approaching forest fire season, made good use of the Forest Service telephone systems by calling up mountaineers, and in many cases riding the trails. The importance of this information work in the mountains could only be realized by those who know that many families in the more remote mountainous regions of the western forests ofttimes go for weeks without getting their mail or seeing a visitor.

Applications for enlistment in the United States Forestry Regiment for work in the forests of France are pouring in upon the Forest Service from lumberjacks, woodsmen, and outdoor people from all parts of the State of California. The applications are placed on file and action will be taken as soon as the final plans for the formation of the regiment are received from Washington. To date about sixteen officers from the National Forests in California have been listed for commissions. Trained foresters and expert lumbermen are to be in command. Axemen, tie cutters, sawyers, lumberjacks, saw filers, millwrights, portable sawmill men, teamsters, blacksmiths, cooks, motorcycle and motor truck operators will make up the rank and file. The duties of the regiment will be to aid in supplying the continuous and insistent demand for lumber for railroad and road construction, cantonments, posts for wire entanglements, timbers for roofs of dugouts, and numerous other purposes.

Plans for the immediate mobilization of a detachment of 300 United States lumbermen for serice in England in the allied cause were perfected at a recent meeting of representatives of large lumber interests of New England, as a result of informal international communications by cable between the Massachusetts Committee on Public Safety and the British Government. This is expected to be the first of several detachments of the United States' most efficient woodsmen.

Trade Outlook Justifies Optimism

By Edward Hines

Fundamental facts must be reckoned with in whatever of consideration is given to any subject. Different viewpoints, the outgrowth of various opinions and too often vague theories, unfortunately, not only retard progress, but render a really intelligent discussion of a subject, if not well nigh impossible, at least indefinite and leading away from satisfactory and successful conclusions. Of the many illusions under which the manufacturers of lumber have suffered greatest harms during the past decade, none have been so harmful or so injurious to our progress as the one conceived in the too general belief that individual effort counts for as much to the welfare of the industry as the co-ordination of interests. Selfish interests opposed to co-operation of all interests; subordinating the good of the institution to individual desires and the greed for individual aggrandizement have, from the beginning of time, interrupted progress and destroyed opportunities. To accomplish the desired end it is of the utmost importance that the majority be followed by the minority.

The problems that confront the manufacturers of lumber to-day are largely fraught with elements that have always prevented the advancement to which the industry is rightfully entitled. A too apparent disregard for essentials and a quiescent mental attitude that has threatened to become a permanent condition of the mind, coupled with a general tendency to reject anything that is new and away from the traditional customs of more or less doubtful value, have conspired to render the solution of our difficulties troublesome and annoying rather than pleasing and gratifying.

General conclusions are too often drawn from too small a number of observations, and from an exceedingly limited knowledge of actual conditions. Failure to comprehend actual facts and the tendency to be misled by theories and impractical ideas are quite as detrimental to our success as that smug confidence in which so many of us repose, satisfied that we have accomplished all that is ours to accomplish and all that it is possible to do. The inertia of minds at rest; the inclination to stubbornly defend older ideas because at some time or other in the past they have yielded profit, notwithstanding their apparent uselessness in this generation, and the failure to respond to a renewed and more lively interest in the prospects of our industry for the future, are every one of them elements that we must meet with determination and strenuous opposition if we expect to succeed in our efforts to establish our undertaking on a level with other great pursuits in the world's commerce. I cannot too strongly impress upon you the necessity for taking your association work more seriously. There is so much to be accomplished, so much to think about, and so much to do, that, while the task seems sometimes to be gigantic and almost insurmountable, nevertheless the duty is ours to perform, and there can be no reasonable excuse for our shirking it or attempting an evasion of our responsibilities. Instead of shooting at pink snakes and purple toads, let us direct our aim at something more tangible, something really more vital to our well-being as an industry. History tells us what has happened in the past, but not the future, and it remains for us to help mould the future and shape our destinies with a view to knowing what the future shall be. Whoever accepts the past for a guide must expect to be led backward. The world has profited slightly indeed from the resurrection of old records—its astounding benefits have come through the exploration of unventured spaces and the exploitations of unobserved opportunities. Civilization's coat-of-arms is marked with the surveyor's transit, the mariner's compass, and the scientist's test-tube. The barriers in our way have yet to prove too great for courage and reason.

In our contemplation of the future and what it shall reveal to us, as to the permanency of values of our products and how best to attain that permanency, we must carefully consider the present conditions, what has brought them about, and how they compare with added costs of production, and watch and heed the future that affects our costs and probably future increases. These added costs of production are elements too for future reckoning, in that they may or may not fluctuate in proportion to the market fluctuations of lumber. The recent enhancement in prices of quite every item of lumber of all kinds, has come about through a combination of circumstances that renders it difficult to even guess what may happen in the time to come. We can only fortify ourselves with facts as they are presented to us, and by making such comparisons as are necessary to enable us to arrive at a practical solution of what we must do to avoid past errors and future complications. In my investigation of existing conditions I have been impressed with the astounding array of cost of materials that have increased our costs of operation far beyond any figures I have considered possible. And in my preparation of comparative costs, relative advances in prices, etc., of the various commodities of commerce, I can but feel that whatever of advantage may have accrued to the benefit

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of lumber has been decidedly small by comparison with those that have affected nearly every other known product.

A careful consideration of these advances shows a startling appreciation on some articles, a very marked advance on others, and relatively a modest advance on lumber and woodwork. They show conclusively that lumber is not high in price by comparison with almost every other product.

For instance, pig iron has advanced since 1914 about 400 per cent.; copper, 115 per cent.; 26 grades of metal, 107 per cent.; canned goods (where they can be had), 100 per cent.; lard, 100 per cent.; wheat and flour, over 100 per cent.; wrapping paper, 82 per cent.; glass, 80 per cent.; coal, from $3.40 to $6.50; lumber, 15 per cent.; woodwork, 15 per cent.; woods labor, over 100 per cent. and less efficient; mills and yards, from $1.75 to $2.50.

From this you can see that lumber and woodwork have not attained the distinction of having reached to the general level of values of other products.

Of the numerous items of supplies, provisions, etc., which manufacturers of lumber must use in their operations, I have found that the average advance in cost by comparison with figures that prevailed in 1914 is about 75 per cent., for instance:

	Cost 1914. Per doz.	Now. Per doz.
Mill brooms	$ 4.50	$ 7.00
Belting	1.73	3.46
Babbitt	.05½	.10
Machine bolts	1.68	2.69
Riveted chain	.20	.42½
High speed P.M. knives	.24	.75
Lath twine	7.00	21.00
Nails	1.88	3.94 and advanc'g
Hexagon nuts	4.50	9.00
Pulleys	3.20	7.68
Band saws	73.60	110.40
Rope	10.75	24.27

General food provisions have averaged from 75 to 200 per cent. higher, notably beans, from $2.80 to $7.50; flour, $4.50 to $9.30 and up; potatoes, 60c to $2, and so on.

You are all familiar with the increased labor costs. In the woods in two years, about 100 per cent., and with at least 25 per cent. less efficiency, the average extra costs running around $4 per thousand feet. At the lumber plants labor has gone up about 50 per cent.; skilled help, 10 to 15 per cent.

If we are to hold our own, maintaining values at a level commensurate with those that we must secure in order to show a fair value for our stumpage with added costs of operation, taxes, interest, depreciation, overhead charges, and last, but not least, the risk of the elements, destroying in many instances millions of feet of timber by the ravages of wind and fire, we have indeed a problem, the solution of which will put to the test our best efforts and our most intelligent cooperation. There must also be a better understanding of the opposing forces that are sure to compel our attention, once we return to a more normal level of business conditions. Temporary advantages such as we are now enjoying cannot be made enduring without a broader and more liberal intercourse and a more confiding and less restricted understanding as between the widely diversified interests of our industry. The weaknesses that disrupt closer relations between the various elements of so great and vast an undertaking must be eliminated, root and stem, and there must come a harmonious blending of all these elements.

Willows are weak, but they bind the fagot. There is mighty little strength in a single unit or in many units acting without the singleness of purpose that characterizes the success of any project or undertaking. Harmoniously blended in unison and of one accord, they securely weave their great influence throughout the webb and woof of our commercial life, and firmly bind the object of our efforts with irresistible and irrepressible solidity.

Of the many splendid opportunities that present themselves for our careful thought and consideration, as offering inducements to our better conception and understanding of these opportunities, witness the recent return of a world-wide demand for wooden ships—of a type long since discarded, but now deemed to be useful again since the demand for tonnage is so much greater than the supply. On both the Atlantic and Pacific Coasts shipwrights who learned their trade a generation ago have come back to work with mallet and adze, trimming the frames of wooden ships. Who shall say that this resumption of activity in this industry may not foretell a long and useful career for wooden ships, and the amount of lumber required in this new channel is beyond our conception, and is bound to have its effect on all kinds of lumber values.

In recent years the new type of wooden block pavement, made of creosoted wood, has found a place as a practical utility for purposes of serving a public need for a better street pavement. There has been some concerted effect on the part of manufacturers of lumber here and there, to create a favorable public sentiment for this useful material, but it has not gone far enough; it has not penetrated beyond the ephemeral popularity of a new product, and the real value of its suitability has not been revealed to the layman who needs to know facts before he becomes thoroughly interested. This also furnishes food for thought for the future in considering the demand for common lumber.

In the twentieth century demand for fireproof construction in buildings there is open a field of great possibilities for us in educating architects and engineers to the larger use of wood in the erection of a type of slow-burning construction that answers to every practical demand for the ideal fireproof building. Some effort has been expended in the direction of educating the public to the excellence of this class of buildings, but in this, too, we have not progressed as the exigencies of the situation demand.

Doubtful results have been attained in the substitution of steel for wood in many types of cars, and I am not so sure that railroad officials have not concluded to discontinue entirely the use of steel in a great many instances. Granting that obviously good reasons exist, why, in certain parts of car construction, steel is preferable to wood, by the same taken, wood should replace steel in other parts, and it is our duty to ascertain the facts and present them in a practical way for a more logical selection of materials that shall hereafter be used in this work. There will shortly be an enormous amount of material used for constructing new cars and repairs, to relieve the unprecedented shortage, and we are certainly entitled to our shade of this business.

Many other examples of substitution of materials for wood and wood products may easily occupy our valuable time in our efforts to get at the facts pertaining to these substitutions. There are good and sufficient reasons why concrete serves numerous and useful purposes to the exclusion of wood; but there are likewise correspondingly good and valid reasons why wood should retain its safe estate in many instances, where previously it has been misplaced without good cause.

While we have had some information about the high costs of general building material that have been in effect during the past year, and the very recent talk of some slight advances on lumber as compared with other commodities lumber comes in competition with in the building line, that it would affect and retard building in the larger cities, particularly of a speculative character, flat-buildings, the cheaper class of homes, etc., it is true only to a limited extent, and probably in the larger cities it has affected trade as compared with a year ago from 15 to 25 per cent., but this must not be given too much consideration, as we have found in many instances that the increase has been most marked. In addition to that, the tremendous amount of money in the rural districts and apparent crop prospects will further stimulate and bring about further returns in home deposits, the farming community, the smaller town communities must have more money to build with now than ever before, so that the year of 1917 should show as much, if not a greater, volume of building than ever before; and when you consider the enormous number of new boats being built, for ocean service, lake service, and river barges, for transportation of coal and other commodities, the amount of lumber which the government will use for construction of barracks, together with the increased mining necessarily taking timber and other lumber; the increased building of factories and enlarging of others, in which to manufacture the many products formerly brought here from Europe, which will also create an enormous demand for crating material—the industry has every reason to look forward to a greatly increased volume in shipments and a materially less production in all lines necessarily creating a shortage in the actual stock on hand, as each month will show this year.

In the marketing of our products there has been all too little real sagacity shown, and unfortunately the sales end of our business has not kept pace with the activity displayed in what may truthfully be said to be twentieth century salesmanship. A dilatory consideration of the need for more intelligent direction of this extremely important department of our business fully justifies criticism and censure, and I am hopeful that a more intensive effort and a keener perception of the need for improvement in this department may soon eventuate.

The evolution of ideas defying traditional fallacies and replacing ancient and time-worn customs with modern and down-to-the-minute twelve-cylinder activity, promises the solution of our difficulties. Events of the past few years have disclosed the urgent need for reforms and the stern necessity for the zealous pursuit of precepts that make for the general betterment of the industry. Strength lies in the fortifications against intrusion and invasion, and to secure such strength we must forget personal aggrandizement and work for the general betterment of our industry as a whole.

Reports from Vancouver, B.C., state that there is still no surplus of logs in the market, and that the demand is better than it has been for some time. The output has been restricted by the backward spring, the shortage of labor and materials and other causes. The prospective demand for long logs for shipbuilding purposes is expected to increase the prices for fir logs.

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Timely Advice to Lumber Salesmen

R. A. Long Tells Why Active Trade Can be Counted Upon to Continue, and Even to Improve

The disturbance of business activities resulting from the war furnishes a series of problems that some lumbermen hesitate to tackle with confidence. Leaders in the industry, however, are generally able to see through the uncertainties of the present into a future of exceptional business activity, and even into a period of good trade during the continuance of the war.

R. A. Long, president of the Long-Bell Lumber Company, Kansas City, Mo., a man of broad vision and keen foresight, has put this conception into striking and convincing words in a letter to salesmen, in the course of which he writes as follows:—

I have noticed in reading your reports that some curtailment is anticipated in building operations as a result of the advance in cost of material and labor, and that some anticipate there will be a general slowing up in business operations.

There is really no precedent whereby we can make an exact comparison, but there are many fundamental principles which do not change; so let us analyze the underlying conditions at this time:

In the first place, many people seem to be laboring under a wrong impression. They are figuring the price of everything has advanced, whereas the purchasing power of money has decreased. And when we compare the relative exchange values of one commodity with another, there is not such a great difference as many seem to think, although it is true that everything entering into munitions of war has increased on account of the excessive demand.

I attribute the decrease in the purchasing power of money to a great extent to the increased circulation. In the United States the circulation per capita has increased from a little over $34 before the war to over $45 at this time. The percentage of gold money in circulation in the United States at this time is greater than it was before the war. While the supply of gold has decreased some in Europe, it has not been to the extent that the supply has increased in this country, because we have had the annual supply of gold throughout the world added to the general stock. And a greater prcentage of the gold production has been coined into money and placed in circulation throughout the world than was true prior to the war. The expansion in the money in circulation in the warring countries has greatly exceeded that in the United States, not because of the increased gold, but the credits have been expanded so that the money in circulation throughout the world to-day greatly exceeds what it has been at any time in the past.

I have noticed in some of your reports that building is being curtailed on account of the high prices of lumber and other products entering into the construction. The builders reason that lower prices will prevail later. I cannot understand how they arrive at this conclusion, because the change has come about by the decrease in supply of almost everything, and the increase in the supply of money. So long as the war continues the number of producers will not increase, but, on the contrary, will continue to decrease. The demands in this country will increase by reason of our entering into the war; the labor supply will decrease; and, hence, the price of everything must increase.

While it is true that rent in most localities has not increased, in the past the interest rates on money have governed to a large extent rental values. Should interest rates increase the rental values will advance proportionately. The relative differences will adjust themselves. The law of supply and demand will govern.

As to Building Activity

With all business activities running to the maximum of labor supply, it is hardly fair to presume that the demands for building will decrease. Should some of the builders discontinue operations, will not those who continue have a better opportunity to make more out of their operations because of the reduced supply and reduced competition than under normal conditions? It seems to me that the question to be considered by the builder is: "Will the purchasing power of a dollar increase after the war?" No one knows. But we do know this, that inasmuch as a large part of the civilized world that has heretofore been producing, has been engaged in consuming and destroying for three years; the accumulations of centuries are about exhausted; the producers are being taxed to the limit in all countries, and their energies confined to the bare necessities of life, luxuries being fast eliminated altogether. We know, also, that over seventy billions of dollars of indebtedness has been incurred by the different warring nations. The interest per annum on this amount alone is equal to about twenty-five per cent. of the entire indebtedness of the world before the war. And while some of the nations may be forced to go through bankruptcy and pay only a small part of the indebtedness, the chances are very remote that any very great per cent. of them will do so. A large portion of the most thickly populated and richest producing territory of the entire world has been devastated. All of this territory will unquestionably be reconstructed as soon after the war as supplies and the human energies of the world will permit. The law of supply and demand has always been, and probably always will be, the controlling factor in the trade of the world. So is it not fair to presume that before there is any perceptible increase in the purchasing power of a dollar these supplies and demands must be replenished. And if the nations owing the large indebtedness pay the interest on even 50 per cent. of it, the laborer, the merchant and the manufacturer must all make money in order to pay the tax that will be necessary to assess and collect. With all of this confronting us it is not likely, for many years to come, that money will have the purchasing power it has had in the past.

"Keeping Business Going"

Statements have been made that our country prosperous can pay our war costs as they come, and have enough over to aid our allies; while, on the other hand, our country unprosperous, business halting, money hoarded through fear or false economy, will be hard pressed to keep food on the table and clothing on the back. "Keeping business going" is a patriotic slogan. Keep money in circulation; keep employment for everyone; keep wages good so that we can have money to spend for war sacrifices. The billions of dollars to be expended in war preparations will be put into circulation in our own country, and this, in itself, will create new wealth for use in the world-struggle for humanity. And the one thing which might halt business now is an unpatriotic, psychological feeling of panic and false ideas of patriotic economy. Every effort possible should be made by both the public and the individual to foster and hold up trade to the end that there will be no unemployed.

The demands of the government are felt particularly in the steel trade, and the distribution of the output of steel for war purposes is the greatest problem in the industry, for with the market so largely sold up to the private trade, the new order of things is liable to cause some serious disturbance. As yet the government's requirements are not fully known, but they are supposed to be about 5 per cent. of the steel production this year, and prior to the government's coming into the market the manufacturers of steel were unable to supply the demand. As a result, the price of iron and steel continue to advance, and those receiving the benefit are placing the money in circulation.

As to the Crop Outlook

While the late season has been detrimental to some crops, much of the winter wheat being killed, later reports show great improvement, and the condition of the wheat crop was known sufficiently early that it permitted the seeding of the ground with some other crops. We believe there never was a time in our history when so great a percentage of our acreage had been planted for some kind of a crop, and at this time the condition of the soil throughout the country is in excellent shape and a splendid return on the whole is fully expected. There have been times when large crops have not meant increased revenues to the producer because of the exceedingly low prices at which they might be marketed, but this year is an unusual exception. No matter what quantity of any crop may be raised, there will be a demand for it, and at extremely high prices. An average yield of ten bushels per acre is usually considered very small, but multiply such a yield by the prices for wheat prevalent to-day, and you will note a tremendous yield in dollars per acre. Carry that thought with you pertaining to all crops, and it seems to us that the value of the products of the soil this year will almost be beyond computation, and we may rest assured this money is going to be invested in some manner, and we believe you will agree with us that it is practically universally true when people are making money they are strongly inclined to spend quite a per cent. of it in building homes and other improvements belonging thereto, and so we are looking for an unprecedented demand for lumber and other building materials during the next several years, and at high prices. We hope you may view the situation in the same way, and if so, we are assured you can so present the matter to your customers as you meet them from day to day in a manner that will cause them to use a greater amount of the materials we furnish than would be true if the people were not educated, or given some substantial reasons to believe that the present prices of building materials are with us for years to come.

There has been a great deal in the newspapers in recent weeks about economy and conservation. We are of the opinion that many of our citizens have misinterpreted our President's message bearing on this subject, for we are sure he did not intend that we should not pursue our business in a most vigorous way the same as of old, save that we should exercise the greater care that no waste of either food or energy might apply. These are unusual times, necessarily more or less confusion is with us, and so let us devote our time and energies towards keeping business going. It is up to each of us to do our part. What think you?

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2—60	H.P. Loco. Type	125 "	"
2—50	H.P. " "	140 "	"
2—50	H.P. " "	125 "	"
2—50	H.P. " "	120 "	Alta.
3—30	H.P. Vertical "	100 "	Ont.
6—25	H.P. " "	100 "	"
8—20	H.P. " "	100 "	"
4—15	H.P. " "	100 "	"
3—12	H.P. " "	100 "	"

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Is That the Best You Can Do?

By W. G. Funcke*

As usual, the retail lumberman is confronted with this question when quoting the farmer on his bill of material. Of course, you expect him to ask you this question. It's a fact that you have taught him this habit. Force of habit, nothing more and nothing less, prompts the farmer to come back at you with this question.

If you make the sale without cutting your price, you laugh and remark to the second man "that he was easy." It has been my experience that the farmer asks this question as soon as you give him the price. (Providing you are the low bidder). It does not occur to him that there might be a difference in the grades or the quantity figured upon. You meet your competitor's bid. You wonder how it is he can sell so cheap, so you figure your actual cost only to find that you have made the sale without profit. Naturally, you are worried.

So finally, in a roundabout way, you ask Mr. Farmer for your competitor's bills so that you can check them against yours. You find the mistake, your competitor left out something. You recall having argued about the price being right—and you said something about the quality—but the fact remains that you cut the price. You feel that the farmer had driven a good bargain. But Mr. Farmer feels differently; as he drives home he thinks. He asks himself this question over and over again. Why didn't I ask for a cut of $100. I could have gotten it just as easily. He convinces himself by the time he gets home that you are still making too much profit on the sale of the bill.

Cutting your price destroys confidence. It suggests a change in the grades or that you will resort to some other method of getting your profit. Of course, every job calls for some extras, you can charge more for this stock. What is the result? If the farmer is on to his job, he will call for an itemized statement.

You will be interested in a case that took place recently. The mail order man happened to be in the territory at the time and was asked to quote on a bill of material. His price was $800.

The farmer was at the stone sharpening the teeth of the reaper blade. Without stopping to look over the bill of material he asked, "is that the best you can do?"

The farmer insited that you will have to do better if you want the business. "Yes, Sar, you will have to do a whole lot better," and added, "Just think of the advertising you will get out of furnishing this bill. This barn will be built on the most prominent road in this country."

The mail order man was determined not to cut his price. He talked quality, prompt shipment, newly cut material and SERVICE.

An urgent request to check over the other bills, only resulted in "I know the other bills are correct."

"But," the mail order man pleaded, "how do you know they are correct?" "Well, didn't John, my carpenter, make out all the bills—they are right."

"It is better to have quoted at a profit and lost than to have cut the price and furnished the bill at less than cost."

Impatient over trying to sell the bill at $800, the mail order man started for his automobile, only to be called back after closing the door. "Did you say you could ship at once?" Further assurance as to the mail order company's ability to ship at once secured the order.

After some talking the farmer was persuaded to show the retail lumberman's bids. One was priced at $960; the other at $975.

With order and check in pocket, the mail order man extended best wishes for a bumper crop, a hearty thank you and farewell.

Several days later, the farmer receives a letter of acknowledgement with memorandum invoice. The invoice read, "Your order has been entered as follows: Check it over carefully as only the items listed will be shipped."

The farmer wires: "You left out the shiplap for all inside walls." Upon checking order back against carpenter's list it was found to be correct.

The mail order man had the money. He insisted that the business was his; in fact the car had been shipped. So, the order held. While the farmer occupied rather an embarrassing position, he had told his friends about the good buy he had made, and it would never do now to tell them about the mistake. To tell his friends that the mail order man's bill was not complete would injure the contractor and ruin his reputation as a shrewd buyer.

In many localities, the retail lumberman is obliged to live up to the customs or traditions of the past. Tradition is a better word, for it suggests something that is old. Something that has been handed to us by our forefathers. Surely this practice of adding a fictitious profit with the expectation of cutting the price to get the business is an old-fashioned idea.

IF YOU WIN YOU LOSE. You may get the business but you lose the customer's confidence. You have proven to him in a very convincing manner that you asked too much for the material in the first place. Again, you have aroused the old fire "Lumber prices are too high." You know the result.

The mail order man has the same proposition put to him in a slightly different and a more tempting manner. The estimate priced at $960 is received with a check for $925, and instructions to ship at once if you want the business.

You can well imagine the result of the mail order man accepting the business at the cut price.

If the mail order man would have accepted the business at the cut price, he would have put himself on record as being willing to cut his price to get the business. News of this kind travels fast: within a short time, the mail order man's office force would be occupied in bargaining with the customer over the price.

To save his business from complete ruin he would have to add to the price at which he was willing to sell an extra sum, the amount he was willing to cut.

Price cutting will not be cured in a day, so this is suggested as a partial remedy. If you have to cut the price to get the business, make a change of some kind. Look over the bill and suggest some other grade, or if necessary, tell your customer about some "special stock" that will allow you to make a cut.

The "special stock" may be your regular material, but refer to it as special or some export material that you picked up at a good price because of the scarcity of bottoms for off shore shipping. Hit upon a good excuse for cutting the bill, if you must, and stick to it.

The mail order man never cuts his price without making a change. It may be nothing more than beaded car siding in the place of three-quarter inch partition—but the change in name serves its purpose.

Price cutting will not stop until the retail dealer becomes fully conscious of the power of SERVICE to get business at a profit.

In the future, the large line yard companies will select men with direct regard to their ability to put a stop to price cutting. After all it is a case of individual effort and individual ability to stop this practice.

You cannot measure up to this standard of salesmanship unless you concentrate when you talk to the farmer. The dealer with a stiff upper lip will sell the farmer instead of letting the farmer sell him.

When you concentrate you use your head, you plan, you analyze and you offer to co-operate. You convince the customer that you will be a help in the building of his home or barn, a real help. Prove to him that you know something about building. More than he does.

Another important feature of every profitable sale is the amount of confidence you inspire, the amount of faith you have in your business. Make your customer believe what you say.

This is successful salesmanship, you can not master the art if you loaf on the job. If you neglect your customers. If you let the customer talk about high prices. Like everything that is worth while, success in selling comes to those who work for it, who think about it and to those who deserve it.

You have heard the statement that 90 per cent. of the business men fail. Many failures are the result of poor selling methods.

Do you belong to the successful 10 per cent. or the 90 per cent., which includes the "price cutters?"

Use your head; don't become scared and act on the impulse.

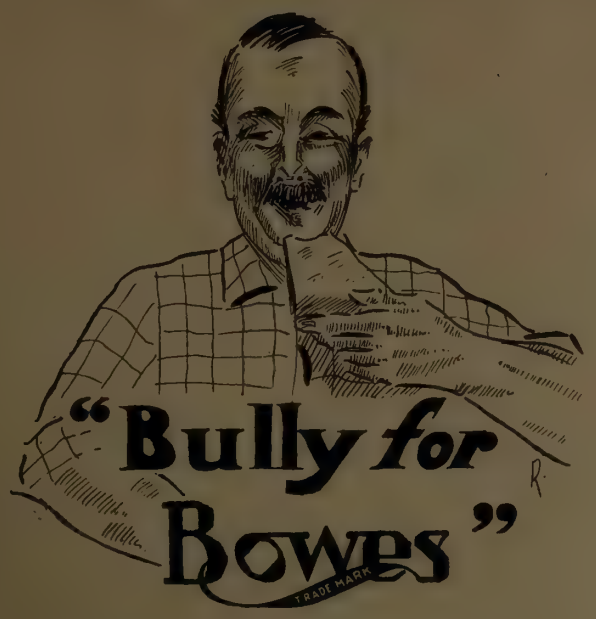
*Reprinted from the Retail Lumberman.

Maine Output Chiefly Pulpwood

Mr. J. A. B. Cowles, of the Pejepscot Lumber Company, reports that the greater part of the cut in the State of Maine this year is pulpwood. Two conditions operated to bring about this result: the shortage of pulp wood and the consequent demand and the competition of the red wood lumber from Oregon and Washington. Since the opening of the Panama Canal it was possible for the western lumbermen to lay down in the eastern States clapboard of red wood at a cheaper rate than they could be manufactured for out of Maine spruce, and as a result of this competition many of the lumbermen were confining their operations to the getting out of pulp wood. The labor situation was causing the operators worry, particularly as it was getting more difficult to obtain skilled laborers, who preferred to work in munition factories in the cities, to lumber mills in the woods. Their own company had been very fortunate in this respect, as most of their men had remained loyal to them..

An Interesting Air Compressor Bulletin

The Canadian Ingersoll-Rand Limited, Montreal, have issued bulletin K-302 (16 pages 6 x 9 in.) illustrating their line of steam-driven, straight line single stage air compressors. The type of machine described is designed to meet the requirements of those who need compact self-contained units of small and medium size for service in shop, foundry, mill or electrical plants, etc. Among the leading features of the design which are dwelt upon in the bulletin are the automatic splash lubrication, dustproof construction, "Circo" silent leaf valves and quick convertibility to belt drive.



He's Happy because He's Well Fed

and it's just plain horse sense that he's going to work harder and better than the man who is ill-nourished.

Of course, a man might get lots to eat and still be badly fed; quality is every bit as important as quantity.

Then there's the matter of price. In a nut-shell then what you want is

The Most of the Best for the Least

and there isn't another supply house in Canada better equipped to give you what you want than the house of Bowes.

We'll gladly prove this to you—give us the opportunity.

The Bowes Company, Ltd.

Manufacturers and Wholesale Distributors

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Branches at Winnipeg, Man., and St. John, N.B.

We can interest you in any of the following lines:

MINCE MEAT, JAMS, JELLIES, CHEESE, BUTTER, EGGS and EGG PRODUCTS, SYRUPS, FIGS, RAISINS, CURRANTS, CANNED FRUITS, POWDERED and CONDENSED MILK, BAKING POWDER, FLAVORING EXTRACTS, Etc.

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N

Trade Mark

FOR SALE

Dry Birch

4/4	Log run, m.c.o.	30 cars
6/4	No. 1 Common and Better	3 "
8/4	do	5 "
10/4	do	2 "
12/4	do	3 "
12/4	Sound Hearts	5 "
14/4	do	2 "
16/4	do	5 "
20/4	do	1 "
5/8	6 ft. and up, 4 in. and up	1 "
4/4	No. 2 Common	5 "
5/4	do	3 "
6/4	do	4 "
8/4	do	8 "
12/4	do	5 "

Dry Maple

4/4	Log Run	1 car
6/4	No. 1 Common and Better	1 "
6/4	No. 2 Common	3 "
8/4	do	5 "
10/4	do	2 "
12/4	Sound Boxed Hearts	4 "
16/4	do	1 "
5/8	6 ft. and up, 4 in. and up average 4½ in.	1 "

Merchantable Spruce

2 x 4	in. Dry	1 car
2 x 6	in. do	1 "
2 x 6	in. Shipping Dry	4 "
2 x 8	in. Dry	1 "
2 x 8	in. Shipping Dry	1 "
2 x 10	in. do	2 "
3 x 4	in. up Dry	2 "

The above are some of our lines in stock, ready for prompt shipment.

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WHOLESALE LUMBER
SANS DIEU RIEN
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Dressed and in the Rough
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GOOD STOCKS PROMPT SHIPMENTS SATISFACTION
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EDGINGS

Ontario

The Allen Lumber Company, Waterloo, Ont., have been registered. L. K. Allen and G. H. Allen are interested.

John B. Smith & Sons, Limited, Callender, Ont., recently suffered a small loss by fire. The loss was fully covered by insurance.

Fire recently destroyed the mills of the Standard Chemical, Iron and Lumber Company of Canada, Limited, at Longford, Ont.

The Abitibi Timber Company, Limited, has been incorporated with head office at Toronto, Ont., and capital stock of $300,000, to carry on business as manufacturers of lumber and timber. The provisional directors are J. W. Bicknell, T. S. H. Giles, J. S. Duggan, W. B. Sturrup and R. A. Stewart, all of Toronto. J. A. M. Andrews, Lumsden Building, Toronto, is also interested in the company.

Under the supervision of Mr. J. F. Hewitson, 260 men are employed on the construction of the new pulp mill at Port Arthur, Ont. The company will manufacture the highest grade of chemical pulp and the capacity will be 50 tons per day, which may be increased to 60 tons by forcing production. Each of the two digestors will be 32 feet high and 19 feet in diameter. The mill will be built upon solid rock foundation.

John Piggott & Sons' mill at Windsor, Ont., had a narrow escape from destruction by fire recently. No damage was done to the building, but a loss of about $1,500 resulted to the stock. The loss is covered by insurance. The fire originated from a gust of flame blowing out into the shavings bin when one of the workmen opened the furnace. Prompt response by the fire department was responsible for confining the blaze to small limits.

Eastern Canada

The Halifax Shipbuilding Company, Limited, Halifax, N.S., have obtained a charter.

Giguere and Fournier, lumbermen, Shawinigan Falls, P.Q., have been registered. Albert Giguere and Amedee Fournier are interested.

Gauthier and Gervais, lumbermen, La Tuque, P.Q., have been registered. D'M. L. P. Gauthier, Ernest Gauthier and Alfred Gervais are interested.

The Wayagamack Pulp and Paper Company, Three Rivers, P.Q., are preparing plans for the erection of an extension to their mill. Mr. R. C. Whitehead is manager of the company.

Plans have been completed by the Three Rivers Box Company, care of N. E. Clement, Three Rivers, P.Q., for the erection of a box factory to cost $60,000. The manager of the company is Mr. M. N. Gilbert, d'Israeli, P.Q. Tenders will be called shortly for two sheds, 1½ storey, 150 ft. x 70 ft., plastic brick construction, and a sawmill 1½ storeys, 100 ft. x 40 ft.

The capital of the Quebec Forest Product Company, Ltd., is $40,000. The object is to manufacture pulp and paper and to act as dealers in lumber, pulp, and paper. The following are interested: Messrs. F. C. Charlot, lumber agent, Cambridge, New York State, U.S.A.; J. P. Galibois, bookkeeper; J. G. McLaughlin, real estate agent; A. G. Nosworthy, architect, and Ant. Paradis, office clerk, of Quebec.

On August 21 next the Department of Lands and Forests of the Provincial Government of Quebec will offer for sale by auction timber limits in the districts of Upper Quebec, St. Maurice, Lower Ottawa, Lake St. John West, Lake St. John East, Saguenay, Bonaventure West, and Rimouski West. The largest area is 1,200 square miles, situated in the Upper Ottawa and upper basins of the Rivers Kapitajiwan and Sho-Shoquan. A condition of the sale is that the purchasers must within three years manufacture within the province from timber cut on the territory either pulp or paper in the proportion of 10 tons per day to the 100 square miles, or 10,000 feet board measure of lumber per day per 100 square miles.

Letters patent have been issued by the Lieutenant-Governor of the Province of Quebec incorporating the Laurentian Forest Protective Association Limited. The Hon. R. Turner and Messrs. B. A. Scott, lumbermen, A. J. Price, manufacturer, C. A. Sewell, manager, and Robert P. Kernan, lumberman, of the city of Quebec, are interested. The powers granted include the installation and operation of a system of fire protection in the following district: bounded on the west by the eastern boundary of the timber lands under the control of the St. Maurice Forest Protective Association, Limited, on the north by the height of land for waters running into Lake St. John and Saguenay River; on the east by the height of land for waters running into the River Laval; and on the south by the River St. Lawrence. The Association also has power to establish and maintain a telephone system, build and maintain roads and trails and observation towers, and to co-operate with others in the protection of forests from fire. The capital is $20,000 in $2 shares.

Western Canada

The Empire Lumber Company, Limited, have opened a branch at Canora, Sask.

The North West Lumber and Supply Company, Limited, has been incorporated with capital stock of $200,000, and head office at Regina, Sask.

Lumber Products Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $45,000, to carry on business as lumber and timber merchants, sawmill proprietors, etc.

The Western Canada Shipyards Limited, has been incorporated with head office at Victoria, B.C., and capital stock of $30,000, to carry on business as ship builders and ship repairers in all branches.

The A. A. Plumber Company, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $25,000, to carry on business as foresters, timber merchants, loggers, sawmill proprietors, etc.

The Harrison and Lamond Shipbuilders Limited, has been incorporated with capital stock of $100,000, and head office at South Vancouver, B.C., to carry on business as builders of ships, vessels, and boats of every kind.

The Undine Logging Company, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $10,000, to carry on business as timber merchants, sawmill, shingle mill, pulp mill and paper mill owners, loggers, lumbermen, etc.

The plant of the Rainy River Pulp and Paper Company at Port Mellon, B.C., has commenced the production of kraft pulp. The company report that a second unit is being planned and that construction work upon it will be commenced immediately. This will double the present capacity of the plant.

The Quality Lumber Yards, Ltd., have been incorporated with head office at Winnipeg, Man., and capital stock of $10,000, to carry on business as manufacturers of and dealers in lumber and timber of all kinds. Among those interested are H. S. Y. Galbraith, E. P. Hayden, R. H. Attridge and T. W. Robinson, all of Winnipeg.

Sealed tenders are being received by the Minister of Lands for B. C. until the 9th day of July, 1917, for the purchase of License X975, to cut 1,445,000 feet of cedar and fir on an area situated on two separate areas adjoining Timber Sale X616, Hotham Sound, New Westminster District. Two years will be allowed for the removal of the timber.

The planing mill, box factory and cross arm factory, together with the greater part of the machine shop belonging to the Cameron Lumber Company, 355 Garbally Road, Victoria, B.C., were recently destroyed by fire. The loss is estimated at $100,000. The insurance was small. The fire was caused, it is believed, by a hot journal box. Only the absence of wind enabled the firemen to save the mill yard in which there is a valuable stock of lumber.

Mr. J. T. Paxton, receiver for the British-Canadian Lumber Corporation, Vancouver, B.C., which has extensive timber holdings and three mills, has received the permission of the Supreme Court to report to the shareholders and noteholders the absolute need of further financial assistance if a forced sale of the assets is to be avoided. Mr. C. B. Macneill, K.C., explained to the court that the holders of the receiver's certificates and the bondholders were represented in London, England, by a committee and that they had a scheme for reorganization to take advantage of the improved condition of the lumber market. In 1915 permission was given to raise $550,000 on receiver's certificates. Of this approximately $437,000 had been received and disbursed in meeting pressing claims. Only $62,000 in cash remained in the hands of the liquidator, over $51,780 in license fees fell due in July and there were some $166,240 in arrears. An effort is now to be made to convince the bondholders that it will be wise to continue to finance the estate.

Douglas Fir Masts for all U. S. Ships

Specifications have been issued by the United States Emergency Fleet Corporation for the spars and masts for the wooden vessels which are to be built on the Atlantic, Gulf and Pacific Coasts for the United States Government. These spars and masts are all to be of Douglas fir. Each vessel will be equipped with a foremast, a mainmast and eight cargo booms. The foremast will be 72 feet 6 inches long, 8 inches in diameter at the top, 18 inches in diameter at the heel and a maximum diameter of 23 inches. The main mast will be 86 feet long. The booms will be 42 feet long, 9 inches in diameter at the top, 12 inches mid-diameter and 10 inches in diameter at the base. It is expected that 600 of the larger size and 2,400 booms will be required.

Pulpwood from Newfoundland

The Newfoundland Legislature, now in session, is expected to enact a law permitting export to the United States of a considerable quantity of pulp wood. This was intended for shipment to England and France, but, because of the shortage of ships, its transfer to those countries has become impossible.

We have for sale the following

DRY SPRUCE

1 x 4 in. 10/16 ft. merchantable	394 M
1 x 5 in. 10/16 ft. merchantable	250 M
1 x 6 in. 10/16 ft. merchantable	31 M
1 x 6 in. 10/16 ft. merchantable	29 M
1 x 10 in. and 11 in. 10/16 ft. merchantable	16 M
1¼ x 8 in. 10/16 ft. merchantable	46 M
1¼ x 9 in. 10/16 ft. merchantable	13 M
1¼ x 10 in. and 11 in 10/16 ft. merchantable.	7 M
2 x 4 in. and up 10/16 merchantable	100 M
3 x 6 in. 10/16 merchantable	200 M
2 scant. x 4 in. 10/16 merchantable	73 M
2 scant. x 5 in. 10/16 merchantable	190 M
2 scant. x 6 in. 10/16 ft. merchantable	245 M
2 scant. x 7 in. 10/16 merchantable	117 M
2 scant. x 8 in. 10/16 ft. merchantable	95 M
1 x 5 in. and up 10/16 ft. cull	480 M
2 x 4 in. and up 10/16 ft. cull	53 M
2 scant. x 4 in. and up 10/16 ft. cull	75 M
3 x 4/8 in. 10/16 ft. cull	250 M
3 x 9 in. and up 10/16 ft. cull	500 M

If interested, would be pleased to quote lowest prices, which are subject to stock being on hand on receipt of enquiry.

The McLennan Lumber Co.
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Wholesale and Retail
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WHOLESALE LUMBER AND TIMBER
Dressed and Rough
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Made in four sizes, from ¾ in. dia., to 1½ in. dia. Steel Hawser.
The most complete and up-to-date Towing Machine on the market to-day.
We have installed a large number of these machines on the Atlantic and Pacific Coasts and Great Lakes, and not one of our customers regret having bought our machines.
It is automatic, making it impossible to part the Hawser and lose the tow in rough weather.
Will make money for its owner by not having to purchase new Manilla Towing Hawser every Spring.
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Write for Prices and Testimonials.

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THE money wasted in keeping a stretching belt taut amounts to a surprising figure. If you use "Goodhue Belts" in your mill or factory you can save most of this money because "Goodhue Belts" stretch less by 15 to 25 per cent. than any other belt. They are made from skillfully selected hides with the stretch taken out of each section before it is made up into the belt.

According to the conditions under which the belt is to run, we recommend "Extra," "Standard" or "Acme Waterproof" belts.

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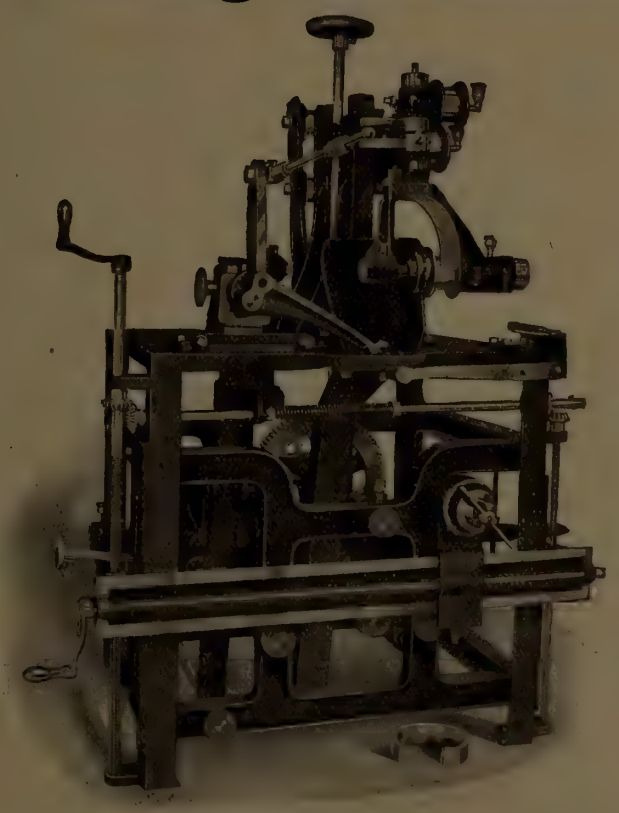
Pulleys
Retoothers
Setters
Shapers
Sharpeners
Solder



Straight Edges
Stretchers
Swages
Tension Gauges
Tools

Bandwheel Cutter and Tool Grinders

Knife Grinders and Balances

Automatic Rip and Crosscut Circular Saw Sharpeners.—Size for Saws 6" to 96" Diameter.

Describe your requirements. Catalog with special information furnished on request.

Machinery Company of America Grand Rapids, Mich., U.S.A.

"COVEL"—"HANCHETT"—"B.T.&B." Machinery

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better.	$50 00	52 00
1½ inch No. 1 cuts and better.	60 00	62 00
2-in. No. 1 cuts and better	62 00	64 00
1½-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	52 00	54 00
4/4 No. 2 and 3 cuts		33 00
5/4 and 6/4 No. 2 and 3 cuts	38 00	40 00
8/4 No. 2 and 3 cuts	40 00	42 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	35 00	36 00
1 x 6 common and dressing ...	37 00	39 00
1 x 8 common and dressing ...	38 00	40 00
1 x 10 common and dressing ..	40 00	42 00
1 x 12 common and dressing ..	43 00	45 00
1 x 10 and 12 mill cull stocks	30 00	31 00
1-in. mill cull sidings	27 00	28 00
5/4 and 6/4 x 4 m.r., m.c. out.	35 00	36 00
5/4 and 6/4 x 5 m.r., m.c. out.	35 00	36 00
5/4 and 6/4 x 6 m.r., m.c. out	35 00	36 00
5/4 and 6/4 x 8 m.r., m.c. out.	36 00	37 00
5/4 and 6/4 x 10 m.r., m.c. out	42 00	43 00
5/4 and 6/4 x 12 m.r., m.c. out	44 00	45 00
2 x 10 common	36 00	38 00
2 and 3 x 12 common	39 00	40 00
1 x 8 box and common		33 00
1 x 10 inch box and common.		35 00
1 x 12 inch box and common.		35 00
1-in. mill run sidings		35 00
1-in. mill run shorts		28 00
1-in. mill run Norway		30 00
2-in. mill run Norway	33 00	35 00
Norway, c. and cf. 1-in.	38 00	40 00
Norway, c. and cf. 1½-in. ...	39 00	41 00
Norway, c. and cf. 2-in.	39 00	41 00
Spruce mill run 1-in. and 2-in.	31 00	32 00
Spruce mill culls	26 00	27 00

Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ..		23 00
1 x 6-in. x 9 to 16 ft.		27 00
1 x 8-in. x 9 to 16 ft.		28 00
1 x 10 and 12 in. x 9 to 16 ft.		29 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		26 00
1-in. No. 2, 6-ft. to 16-ft.		20 00
2 x 4 to 12, 10 and 16 ft.		27 00
2 x 4 to 12 in., 12 and 14 ft...		27 00
2 x 4 to 12-in., 18 ft.		30 00
2 x 4 to 12-in., 20 ft.		32 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		22 00
Clear in. B.C. cedar, kiln dried	50 00	55 00

Douglas Fir:	
Dimension Timber up to 32 feet:	
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	40 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16	41 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.	41 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.	42 00
10x20, 18x20, up to 32 ft.	42 50
6x18, 8x18, up to 32 ft.	42 50
6x20, 8x20, up to 32 ft.	42 00
Timber in lengths over 32 feet subject to negotiation.	
Fir flooring, 1 x 3, edge grain..	43 50
Fir flooring, 1 x 4, edge grain..	46 50
Fir flooring, 1 x 4, flat grain..	39 50
No. 1 and 2, 1-in. clear Fir rough	50 75
No. 1 and 2, 1¼ and 1½ in., clear Fir rough	56 00
No. 1 and 2, 2-in. clear Fir rough	52 00
1½-in. No. 1, 4-ft. pine lath.	6 00
1½-in. No. 2 4-ft. lath	5 70
1½-in. 32-in. pine	2 75
1½-in. No. 1 4-ft. hemlock lath.	4 50
1½-in. mill run hemlock lath.	4 25
XX B. C. cedar shingles	3 35
XXX 6 butts to 2-in.	4 45
XXXXX	4 95

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	$65 00	71 00
Ash, white, No. 1 common....		45 00
Ash, brown, 1sts and 2nds, 4/4		57 00
Ash, brown, com. and bet. ...		45 00
Ash, brown, 1sts and 2nds, 6/4 and 8/4		65 00
Birch, 1st and 2nds, 4/4		55 00
Birch, No. 1 com. and bet., 4/4		47 00
Birch, 1st and 2nds, 6/4 and 8/4		65 00
Birch, 1st & 2nds, 10/4 and 12/4		78 00
Birch, 1st and 2nds, 16/4		85 00
Basswood, 1sts and 2nds, 4/4 ...		53 00
Basswood, No. 1 com. and bet., 4/4	45 00	47 00
Basswood, No. 2 and 3 common		28 00
Basswood, 6/4 and 8/4, 1sts and 2nds	58 00	60 00
Basswood, 6/4 and 8/4, com. and bet.		48 00
Basswood, 4/4, No. 2 com. and bet.		42 00
Soft elm, 1sts and 2nds, 4/4 ..		48 00
Soft Elm, No. 1 com. and bet., 4/4		43 00
Soft Elm, No. 2 and 3 common		20 00
Soft Elm, 6/4 and 8/4, 1 and 2		60 00
Rock Elm, 1sts and 2nds, 6/4 and 8/4		65 00
Rock Elm, No. 2 com. and bet., 6/4 and 8/4		45 00
Soft Maple, 1sts and 2nds, 4/4..		48 00
Soft Maple, com. and bet., 4/4.		38 00
Soft Maple, 6/4 and 8/4, 1sts and 2nds		55 00
Hard Maple, 1sts and 2nds, 4/4		47 00
Hard Maple, com. and bet., 4/4		42 00
Hard Maple, 12/4, 1sts and 2nds	65 00	70 00
Hard Maple, 16/4, 1sts and 2nds	85 00	90 00
Red Oak, plain, 1sts and 2nds, 4/4		64 50
Red Oak, plain, No. 1 com., 4/4		44 50
Red Oak, plain, No. 2 com., 4/4		33 50
Red Oak, plain, 1sts and 2nds, 6/4 and 8/4		70 00
Red Oak, plain, 1sts and 2nds, 12/4 and 16/4	77 00	85 00
White Oak, plain, 1sts and 2nds, 4/4		
White Oak, plain, No. 1 com., 4/4		44 50
White Oak, plain, No. 2 com., 4/4		33 50
Red and White Oak, plain, 1sts and 2nds, 5/4 and 6/4	65 00	68 00
Red and White Oak, plain, No. 1 com., 5/4 and 6/4		48 00
Red and White Oak, plain, No. 2 com., 5/4 and 6/4		35 00
Red and White Oak, plain, 1sts and 2nds, 8/4		70 00
Red and White Oak, plain, No. 1 com., 8/4		50 00
White Oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00	85 00
White Oak, ¼ cut, 1sts and 2nds, 4/4		89 00
White Oak, ¼ cut, 5/4 and 604, 1sts and 2nds		92 00
White Oak, ¼ cut, No. 1 com.		57 00
Hickory, 1sts and 2nds, 4/4 ...		64 00
Hickory, 6/4, 1sts and 2nds..		70 00
Hickory, 8/4, 1sts and 2nds ..		75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$55 00	57 00
1¼-in. and 1½-in. x 8-in. & up	64 00	67 00
2-in. x 7-in. and up	65 00	68 00
No. 2 cuts 2 x 8-in. and up...	45 00	48 00
Pine good strips:		
1-in.	45 00	46 00
1¼-in. and 1½-in.	55 00	56 00
2-in.	56 00	57 00
Pine good shorts:		
1-in. x 7-in. and up	42 00	45 00
1-in. x 4-in. to 6-in.	32 00	34 00
1¼-in. and 1½-in.	53 00	55 00
2-in.	54 00	56 00
7-in. to 9-in. A sidings	27 00	30 00
Pine, No. 1 dressing sidings ...	42 00	45 00
Pine, No. 1 dressing strips ...	40 00	42 00
Pine, No. 1 dressing shorts....	34 00	36 00
Pine, 1-in. x 4-in. s.c. strips....		34 00
Pine, 1-in. x 5-in. s.c. strips....		35 00
Pine, 1-in. x 6-in. s.c. strips....		37 00
Pine, 1-in. x 7-in. s.c. strips....		37 00
Pine, 1 x 8-in., s.c., 12 to 16 ft.		38 00
Pine, 1-in. x 10-in. M. R.		40 00
Pine, s.c. sidings, 1½ and 2-in.	30 00	38 00
Pine, s.c. strips 1-in.		33 00
1¼, 1½ and 2-in.	31 00	36 00
Pine, s.c. shorts, 1 x 4 to 6 in.	24 00	30 00
Pine, s.c. and bet., shorts 1 x 5		32 00
Pine, s.c. and bet., shorts, 1 x 6		33 00
Pine, s.c. shorts, 6'-11', 1"x 10"		36 00
Pine box boards:		
1"x 4" and up, 6'-11'		24 00
1"x 3", 12'-16'		24 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	25 00	27 00
Pine, mill cull stock, 1 x 12 ..		32 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.		25 00
O. culls r & w p	18 00	20 00
Red Pine, log run:		
mill culls out, 1-in.	28 00	30 00
mill culls out, 1¼-in.	28 00	30 00
mill culls out, 1½-in.	28 00	30 00
mill culls out, 2-in.	28 00	30 00
mill culls, white pine, 1"x 7" and up	29 00	30 00
Mill run Spruce:		
1"x 4" and up, 6' 11'	24 00	25 00
1"x 4" and up, 12'-16'		30 00
1"x 9"-10" and up, 12'-16'		36 00
1¼"x 7" 8-9" and up, 12'-16'		35 00
1¼"x 10" and up, 12'-16' ...		36 00
1½" & 2"x12" and up, 12'-16'		40 00
Spruce, 1-in. clear (fine dressing and B)		37 00
Hemlock, 1-in. cull	24 00	25 00
Hemlock, 1-in. log run	23 00	24 00
Hemlock, 2x4, 6, 8, 10, 12/16' ..	26 00	28 00
Tamarac	24 00	26 00
Basswood, log run, dead culls out	30 00	40 00
Basswood, log run, mill culls out	26 00	28 00
Birch, log run	25 00	30 00
Soft Elm, common and better, 1, 1½, 2-in.	25 00	30 00
Ash, black, log run	32 00	40 00
1 x 10 No. 1 barn	40 00	45 00
1 x 10 No. 2 barn	38 00	40 00
1 x 8 and 9 No. 2 barn		38 00
Lath per M:		
No. 1 white pine, 1½-in. x 4-ft.		5 00
No. 2 white pine		4 75
Mill run white pine		4 50
Spruce, mill run 1½-in.		5 00
Red pine, mill run		4 75
Hemlock, mill run	2 75	3 00
32-in. lath		4 00
White Cedar Shingles:		
xxxx, 18-in.		5 00
Clear butt, 18-in.		4 00
18-in., xx		2 25
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal.	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	80	85
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Birch Planks		
1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better		
1 x 6 and 8 in.		$74 00
1 in., 8 in. and up wide		83 00
1¼ and 1½ in. and up wide		86 00
2 in. and up wide		88 00
Cuts and Better		
4/4 x 8 and up No. 1 and better		58 00
6/4 x 8 and up No. 1 and better		70 00
8/4 x 8 and up No. 1 and better		72 00
6/4 x 6 and up No. 2 and better		61 00
8/4 x 6 and up No. 2 and better		63 00
6/4 x 6 and up No. 3 and better		55 00
8/4 x 6 and up No. 3 and better		59 00
No. 1 Cuts		
1 in., 8 in. and up wide		50 00
1¼ in., 8 in. and up wide		59 00
1½ in., 8 in. and up wide		61 00
2 in., 8 in. and up wide		64 00
2½ and 3, 8 in. and up wide		84 00
4 in., 8 in. and up wide		90 00
No. 2 Cuts		
1 in., 6 in. and up wide		36 00
1¼ in., 6 in. and up wide		47 00
1½ in., 6 in. and up wide		48 00
2 in., 6 in. and up wide		49 00
2½, 3 and 4 in., 6-in. and up wide ..		68 00
No. 3 Cuts		
1 in., 6-in. and up wide		30 00
1¼ and 1½ in., 6-in. and up wide		35 00
2 in., 6-in. and up wide		36 00
2½, 3 and 4-in., 6-in. and up wide	45 00	48 00
Common and Dressing Mill Run		
1 in. x 4 in.		32 00
1-in. x 5-in.		32 00
1-in. x 6-in.		34 00
1-in. x 8-in.		34 00
1-in. x 10-in.		36 00
1-in. x 12-in.		38 00
1-in. x 13-in. and up		38 00
1¼, 1½ and 2 in.		40 00
No. 1 Barn		
1 inch	38 00	48 00
1¼, 1½ and 2-in.	45 00	51 00
2½ and 3-in.		55 00
4 inch		58 00
No. 2 Barn		
1 inch	35 00	42 00
1¼, 1½ and 2-in.	38 00	44 00
2½ and 3-in.		46 00
No. 3 Barn		
1 inch	32 00	36 00
No. 1, 1, 1¼, 1½, 2-in.		34 00
Box		
No. 1, 1, 1¼, 1½, 2-in.	29 00	31 00
No. 2, 1¼, 1½, 2-in.		26 00
Mill Culls		
Mill run culls, 1-in.		27 00
1, 1¼, 1½ and 2-in.		28 00
No. 2	24 00	26 00
Lath		
No. 1, 32-in. pine		2 00
No. 2, 48-in. pine		5 00
No. 1, 48-in. pine		5 50
No. 3, 48-in. pine		4 50
Hemlock Lath, 48-in.		4 50

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac.

Dimension. S. 1 S. and 1 E.

	6 ft.	8 ft.	10 ft.	14 & 16 ft.
2 x 4, 6, 8 ..	16 00	19 00	22 50	23 50
2 x 10	20 00	20 50	23 50	24 50
2 x 12	20 00	21 00	25 50	25 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH.

Mountain Stock.

Dimension.	
2 x 4, 8, 12, 14, 16	23 50
2 x 4, 10, 18, 20	25 50
2 x 6, 8 to 16	23 50
2 x 8, 8 to 16	23 50
2 x 4 6 and 8 in.; 24, 26, 28, 30, 32 ft.	31 50
2 x 10 and 2 x 12; 8-16 ft.	28 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	30 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	32 50
No. 1 Common Boards.	
4 inch	23 00
6 inch	25 50
8, 10, 12 inch	27 50
Mixed widths	26 50
Flooring.	
4 or 6 inch No. 1	37 00
4 or 6 inch No. 2	32 00
4 or 6 inch No. 3	26 00
Shiplap—Finished.	
6 inch	24 00
8, 10 and 12 inch	25 00
Siding.	
6 inch No. 1	37 00
6 inch No. 2	35 00
6 inch No. 3	27 00
Lath.	
No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50

PINE—ROUGH TIMBER.

3 x 6 in.; 8 to 16 ft.	29 10
3 x 8 in.; 8 to 16 ft.	26 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	29 00
4 x 10 to 10 x 10, 8 x 8, 6x 12 in. up to 32 ft.	31 00

BRITISH COLUMBIA COAST FIR.

Dimension S1S and E.

2 x 4 in.; 6 and 8 ft.	22 50
2 x 4 in.; 12 and 14 ft.	23 50
2 x 4 in.; 10 and 16 ft.	24 50
2 x 4 in.; 18 and 24 ft.	25 50
2 x 4 in.; 22 and 24 ft.	26 50
2 x 4 in.; 26 to 32 ft.	28 50
2 x 10 and 2 x 12 in.; 10 to 16 ft. ...	25 00
2 x 10 and 2 x 12 in.; 18 and 20 ft. ..	27 00
2 x 10 and 2 x 12 in.; 22 and 24 ft. ..	28 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	30 00
2 x 14 in.; 10 to 16 ft.	30 00
2 x 14 in.; 18 and 20 ft.	32 00
2 x 14 in.; 22 and 24 ft.	33 00
2 x 14 in.; 26 to 32 ft.	35 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	26 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	27 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	28 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	29 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	31 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	29 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	30 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	30 50

FLOORING.

Nos. 1 and 2, 1 x 3 in., E. G.	37 00
Nos 1 and 2, 1 x 4 in., E. G.	40 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in. F. G.	30 00
Nos. 1 and 2, 1 x 6 in., F G.	35 00
No. 3, 1 x 4 in.	28 00
No. 3, 1 x 6 in.	33 00

No. 3 Edge grain $3 per M. extra.

SHIPLAP.

B. C. fir, 6 in.	23 50
B. C. fir, 8, 10, 12 in.; 8 to 16 ft.	24 50
No. 2 shiplap, 6 in.	23 50
No. 2 shiplap, 8, 10 and 12 in.	24 50

FIR, COMMON BOARDS, S1S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	22 00
Common boards, 8 to 12 in.	23 00
No. 2 mixed widths	18 00
No. 2 boards, 8 to 12 in.	19 00

SHINGLES.

XXX B. C. cedar	3 05

LATH.

Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's	4 50
Cedar lath, ⅜ x 1⅜ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers, 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00
No. 1 Moulding 8/4	62 00

(Continued on page 58)

The Time You Buy Needs "Watching"

Lloyd George says: *"Time is the deadliest of all the neutral powers.*
"Time is the most powerful factor of the war."

And we say time is the most vital factor in our industries. When you hire men you buy their time; now how do you record it?

The International Recorder is the only safe and sure method known on the market to-day. It gives you the original pay-roll entry PRINTED.

The employee makes the record of his time himself—if he is late or "Out Early" the red entry warns him. If on pay day he is "Short," he knows why and who to blame,—himself.

What is the difference between the labor you purchase and your PRODUCTIVE labor? The difference is overhead burden, which has wiped out the profits of many a firm.

There is an International for every business—let us submit our time recording plan.

The International Time Recording Company of Canada, Limited

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Geo. Morris, Sales Agent
400 Electric Railway Chambers

F. E. MUTTON, General Manager
28 Anderson St.
TORONTO
Toronto Phone—Col. 622.

MONTREAL
W. A. Wood, Jr., Sales Agent
Cartier Bldg., Cor McGill and Notre Dame Sts.
Phone—Main 7025

VANCOUVER—R. Donohoe, 305 Birks Bldg.

CURRENT LUMBER PRICES—Continued

No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	46 - 48	28 - 30	18 - 20
5/4 to 8/4	58 -60	36 - 38	20 - 24
10/4 to 16/4	68 - 70	48 - 50	28 - 30

RED BIRCH

4/4	58 - 60	38 - 40	22 - 24
5/4 to 8/4	60 - 62	40 - 42	24 - 26

SAP BIRCH

4/4	48 - 50	32 - 34	20 - 22
5/4 and up	50 - 52	34 - 36	22 - 24

SOFT ELM

4/4	40 - 42	28 - 30	20 - 22
5, 6 & 8/4	42 - 44	30 - 32	20 - 22

BASSWOOD

4/4	44 - 46	34 - 36	22 - 24
Thicker	42 - 44	32 - 34	22 - 24

PLAIN OAK

4/4	52 - 54	33 - 35	19 - 21
5/4 to 8/4	51 - 53	29 - 31	17 - 19

ASH, WHITE AND BROWN

4/4	51 - 54	29 - 31 -	19 - 21
5/4 to 8/4	61 - 64	34 - 36	20 - 22
10/4 and up	74 - 87	46 - 48	22 - 24

BOSTON, MASS.

White pine uppers, 1 to 2 in.		119 00
Selects, 1 to 2 in.	106 00	109 00
Fine common, 1 in.		78 00
Fine common, 1¼ to 2 in.	85 00	87 00
No. 1 Cuts, 1 in.		60 00
No. 1 Cuts, 1¼ to 2 in.	70 00	75 00
No. 2 Cuts, 1 in.		49 00
No. 2 Cuts, 1¼ to 2 in.	60 00	66 00
Barn Boards, No. 1, 1 x 12		63 00
No. 1, 1 x 10		53 00
No. 1, 1 x 8		50 00
No. 2, 1 x 12		55 00
No. 2, 1 x 10		50 00
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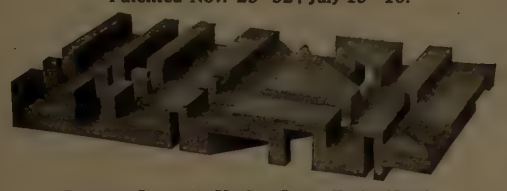

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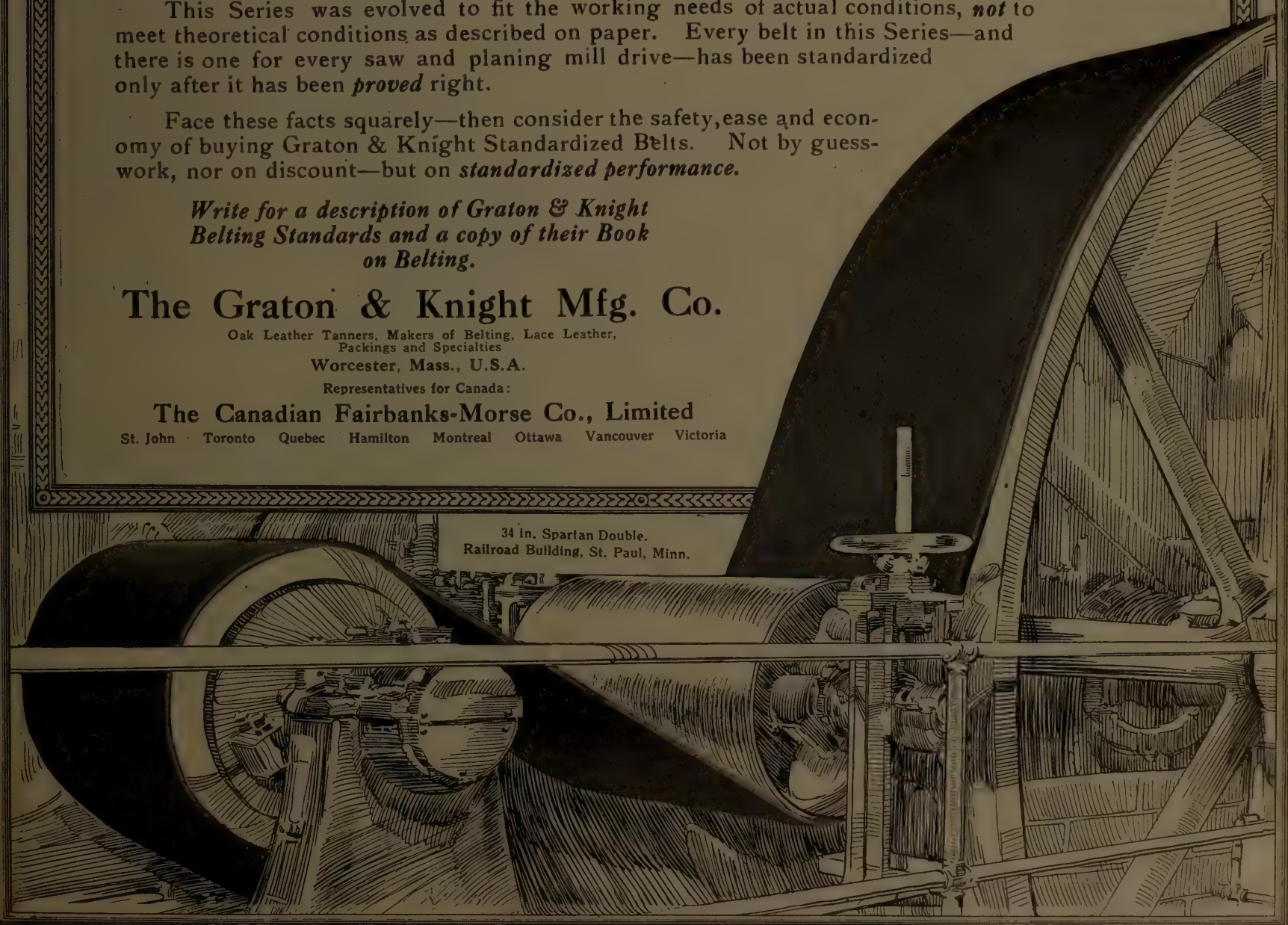

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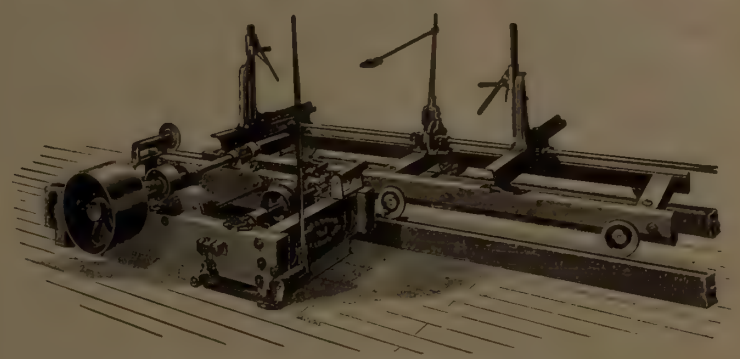

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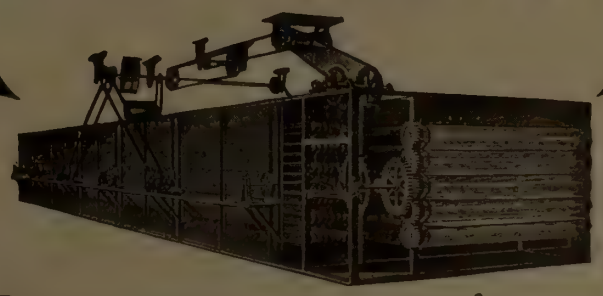

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Canadian Western Lumber Company
Webster & Bro., James

VENEER DRYERS
Philadelphia Textile Mach. Co.

VENEER MACHINERY
Perrin, William R.
Philadelphia Textile Machinery Co.

VETERINARY REMEDIES
Palmer Medical Company

WATER WHEELS
Hamilton Company, William
Smith Company, S. Morgan

WIRE CLOTH
Canada Wire & Iron Goods Co.

WOOD DISTILLATION PLANTS
Blair, Campbell & McLean, Ltd.

WOODWORKING MACHINERY
Canadian Blower & Forge Company
Jeffrey Manufacturing Company.
Long Manufacturing Company, E.
Machinery Company of America
Waterous Engine Works Company
Yates Machine Co., P. B.

WOOD PULP
Austin & Nicholson
Becker & Co.
New Ontario Colonization Co.
River Ouelle Pulp & Lumber Co.

YELLOW PINE
Blanchard Lumber Company
Boake Manufacturing Company.
Crescent Lumber Company.

ATKINS

Inserted Tooth Saws, Bits and Holders are reducing the expenses and increasing the output in hundreds of Canadian mills.

The excellence of Sterling Steel and our improved methods of manufacture make this possible.

Write for our free book "C.L." Full details of our entire line of "Saws for all Purposes."
Let your next order specify ATKINS—We'll do the rest.

E. C. ATKINS & CO.

Factory: HAMILTON, ONT. :-: **Branch: 109 Powell St., VANCOUVER**

The Only Loose Pulley

L. A. DeLaplante Limited

LUMBER

DOORS SASH AND INTERIOR TRIM

PRIVATE PHONE EXCHANGE MAIN ST.

East Toronto June 17/10

Chapman Double
Ball Bearing P/C

Dear Sirs

In regard to double ball bearings supplied by you, we find those on line shaft giving entire satisfaction and find them quite a saving on power, as for the ball bearing loose pulleys, they are decidedly the finest, and only satisfactory loose pulley we have ever had, no noise or heating and consequently no loss of time, which so frequently occurs with the ordinary loose pulley, we have run the loose pulley on our big matcher for nearly two years and consider it a severe test and it runs as nice to day as the first day we used it can recommend your bearings and pulleys, to any one in the manufacturing business especially planing mill work which we have proved.

Yours very truly
L. A. DeLaplante Limited
per W. Graham Supt.

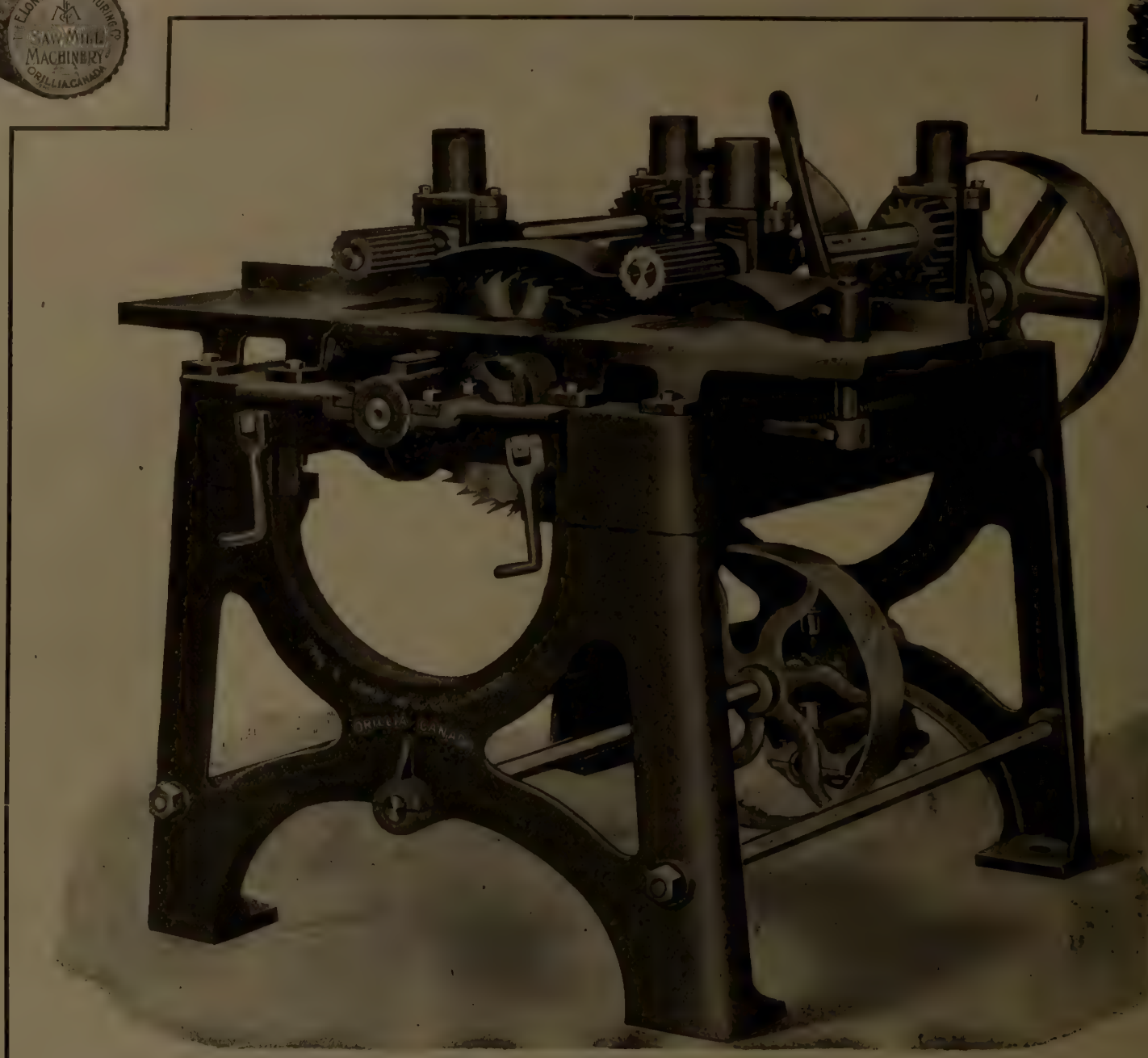
Chapman Double Ball Bearings

have been installed in over 3000 factories of all classes during the past fifteen years, and the above letter is one of many of a similar import, bearing testimony to the efficiency, long life, and cleanliness of the bearing. Some of these have been compiled in a booklet, "Results", which we will be pleased to send on request.

Chapman Double Ball Bearing Co., Ltd.

337-351 Sorauren Avenue, TORONTO

Transmission Ball Bearing Co., Inc., 1050 Military Road, Buffalo, N. Y.



No. 3 Lath Machine

For the mill, whose requirements call for an enormous output, we recommend our No. 3 Lath Machine.

Designed primarily to work in conjunction with our No. 4 and No. 3 Bolters. The well known capacities of these Bolters, both in quantity and quality, will give you an idea of the product turned out by our No. 3 Lath Machine.

Covering a period of years, we have placed these Lath Machines in all parts of Canada.

The reputation they have established has led to repeat sales in the majority of cases where increased capacity was desired.

Simple in construction, strong in frame and bearings, with all parts easily accessible for adjustment, our No. 3 Lath Machine is without doubt the leader in this field.

Floor space, 4 feet x 4 feet 6 inches.

Weight, 1,600 pounds.

Maximum power required, 15 H. P.

Send for Our Catalogue No. 102 and Prices

The E. Long Manufacturing Co., Ltd.

Orillia - Ontario

An Edger for 6" Cants

You can put a 6-in. cant through this edger and know that it will come through edged to a hair. Edger carries 22-in. saws, 6-in. saw collars, leaving 7-in. clear saw blade, more than enough margin for 6-in. stock

Mandrel is 3⅞-in. in diameter, the three bearings that support it are each almost 10-in. long—the rest of the machine is built in proportion. That's why Waterous New Champion Edgers can be crowded to the limit and will turn out full capacity, day after day, without straining.

Notice the feed rolls, two before and two behind the saws. They are machine fluted to give a firm, secure grip on the timber that holds it fast, but will not mar it in any way.

We build up-to-date Machinery for Sawmills of every capacity—circular or band

Catalogues on request

The press rolls are divided, too, making both sides of the machine independent of each other. It's a worth while feature, decidedly.

WATEROUS NEW CHAMPION EDGERS

are built with 40", 48", 56", 60" and 72" opening. They carry as many as four movable and two stationary saws without difficulty.

These edgers cut true and to dimension at all times. The guides are rigid and cannot shift in the cut. They are crowded to correct position and held immovably in place by a steel setting gauge that drops upon them. *No other edger has this feature.*

Waterous New Champion Edgers are fast and accurate cutting, easily operated, and perfectly safe. We stand behind every machine we turn out.

Hundreds are in use in mills all over Canada where quality of sawing is a main consideration. Bulletin No. 113 describes them fully.

The Waterous Engine Works Co., Ltd., Brantford, Canada

$5,000,000.00
worth of mixed metal sold annually.

"FROST KING" METAL

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. Price **30c per lb., Fort William and East; West of Fort William 35c per lb., delivered nearest railway station;** packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our TROJAN BABBITT will stand where all other metals will fail. Price, Fort William and East, **40c per lb.**; West of Fort William, **45c**, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.
Limited

General Mill Supplies MONTREAL

Pink's Lumbering Tools

The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
We manufacture all kinds of lumber tools. Light and Durable.

Long Distance Phone, No. 87

Send for Catalogue and Price List.

Sold throughout the Dominion by all Wholesale and Retail Hardware Merchants.

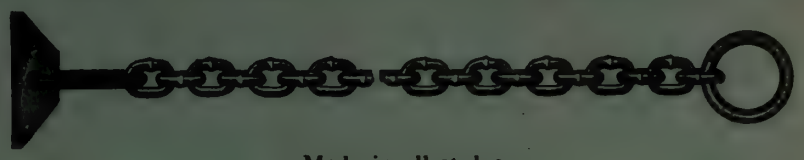
The Thomas Pink Company, Limited

Manufacturers of Lumber Tools

PEMBROKE - - - - - ONTARIO

Canada Lumberman & Wood Worker

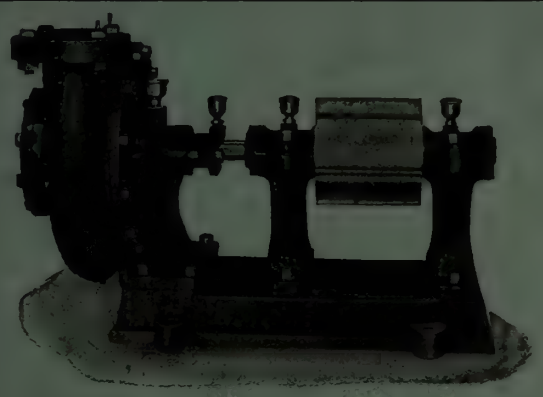
USE
DART
UNION PIPE
COUPLINGS
Your Jobber Sells Them
Pipe Connecting Made Easy
Positively No Maintenance Cost



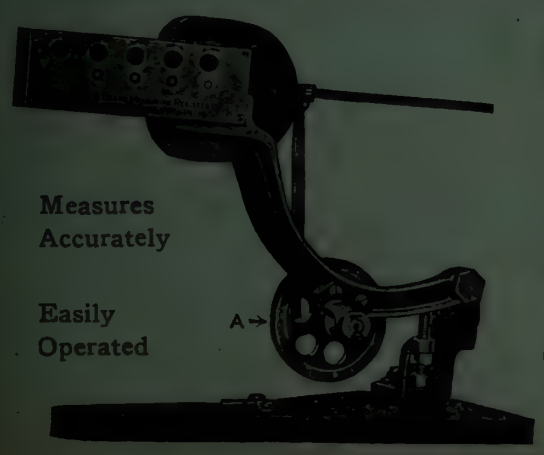
Made in all styles
Electric-Welded Boom Chain
We also specialize
Log Chains and "Dreadnaught" Loading Chain
Made in Canada Write to Fully Guaranteed
McKinnon Chain Co., St. Catharines, Ont.

NON-SLIPPING
MAXIMUM TRANSMISSION OF POWER with HIGHEST DEGREE OF EFFICIENCY
FULL STOCKS
THE BELT WITH A GRIP
Lincona
BALATA BELTING
WATERPROOF
THE IDEAL BELT FOR LUMBER MILLS AND ALL OUTSIDE DRIVES
PROMPT SHIPMENT
THE CANADIAN B.K. MORTON CO., LIMITED
MONTREAL 49 COMMON STREET
TORONTO 86 RICHMOND ST. E
1/6/1

GENUINE "TURBROS"
Balata Belting
Waterproof and Stretchless.
The best belt for sawmills.
Atlas Asbestos Co., Limited, Montreal
(Formerly Turner Bros. Canada Limited)



PUMPS
Vertical
Horizontal
Steam
Power
The Smart-Turner Machine Co., Ltd., HAMILTON CANADA



Measures Accurately
Easily Operated
A

Keep Tab On Your Stock

The Morrison Lumber Measuring Register can be used in the saw mill, planing mill, woodworking plant and retail lumber yard. It can be quickly attached to any machine and is guaranteed to accurately measure every stick as it is fed under the wheel of the register. It saves you money, time and labor.

Write for detailed information.

The James Morrison Brass Mfg. Co. Limited
93-97 Adelaide St. W., Toronto

J. M. T. Steam Specialties
We make a high-grade line including Reducing Pressure Valves, Pop Safety Valves, Injectors, Ejectors, etc., etc.

Alphabetical Index to Advertisers, Page 58 Classified Directory to Advertisements, Page 60

PULLEYS

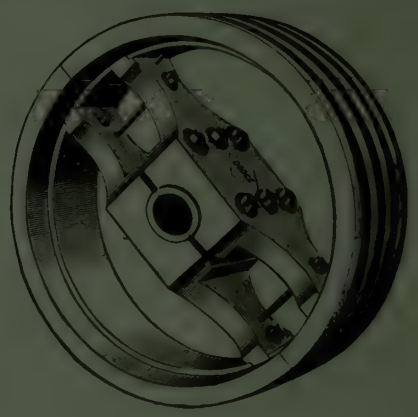
No Keys

—

No Set Screws

—

In Perfect Balance



Lighter

—

Stronger

—

Better Belt Surface

The Dodge Standard Wood Split Pulley

The Wood Split Pulley is better than either cast iron split pulleys or steel split pulleys for the following reasons—

The wood pulley is lighter, stronger, better balanced, and provides a very much better belt surface. It costs 33 1-3% less money and provides 50% more returns in horse-power value. It may be run at very much higher speeds with no danger of bursting—also it may be had quicker and in a greater range of sizes.

It costs less to get—less to put on—and less to keep.

We make approximately 300 Dodge pulleys every day—everybody uses them.

There are more Dodge pulleys making ammunition than any other kind—you can get them quick.

Every pulley is thoroughly nailed. Every pulley is guaranteed for Double Belts.

We are Canada's greatest pulley makers.

If you have not our Books, write us

DODGE MANUFACTURING COMPANY

Toronto - - Montreal

SPRUCE

1916 SAWING—DRY STOCK

Merchantable		5th Quality	
2 x 4 x 10/16 -	50,000'	3 x 5 and up x 6/16' -	160,000'
2 x 5 and 6 x 10/16	60,000'		
2 x 7 x 10/16 -	100,000'		

1917 SAWING

Merchantable

1 x 3 x 10/16	2 x 4 x 8/16	3 x 6 x 10/16
1 x 4 "	2 x 5 "	3 x 7 "
1 x 5 "	2 x 6 "	3 x 8 "
1 x 6 "	2 x 7 "	3 x 9 "
1 x 7 and up	2 x 8 "	3 x 10 "
	2 x 9 and up	3 x 11 "

Mill Culls

1 x 3 and up x 6/16	2 x 4 and up x 6/16	3 x 6 and up x 6/16

Merchantable Spruce Lath 1½ x 4'

Bartram & Ball Limited

WHOLESALE LUMBER

Drummond Bldg. - Montreal, Que.

B.C. Fir Lumber and Timbers

Rough or Dressed

We have Timbers and Dressed Lumber always in transit.

Wire us your enquiries.

B. C. Fir Flooring
B. C. Fir Ceiling
B. C. Fir Mouldings
B. C. Cedar Shingles
B. C. Ship Decking
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KNOX BROTHERS, Drummond Building, 511 St. Catherine St., Montreal, Que.

VANCOUVER OFFICE: PACIFIC BLDG., VANCOUVER, B.C.

SPECIALISTS IN BRITISH COLUMBIA FOREST PRODUCTS

Sole representatives of The Victoria Lumber & Manufacturing Company, Ltd., in Eastern Ontario, Quebec and Maritime Provinces.

George Gordon & Co.

Limited

Cache Bay - Ont.

Manufacturers of

RED and WHITE PINE

PLANING MILL **DRY KILN**

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

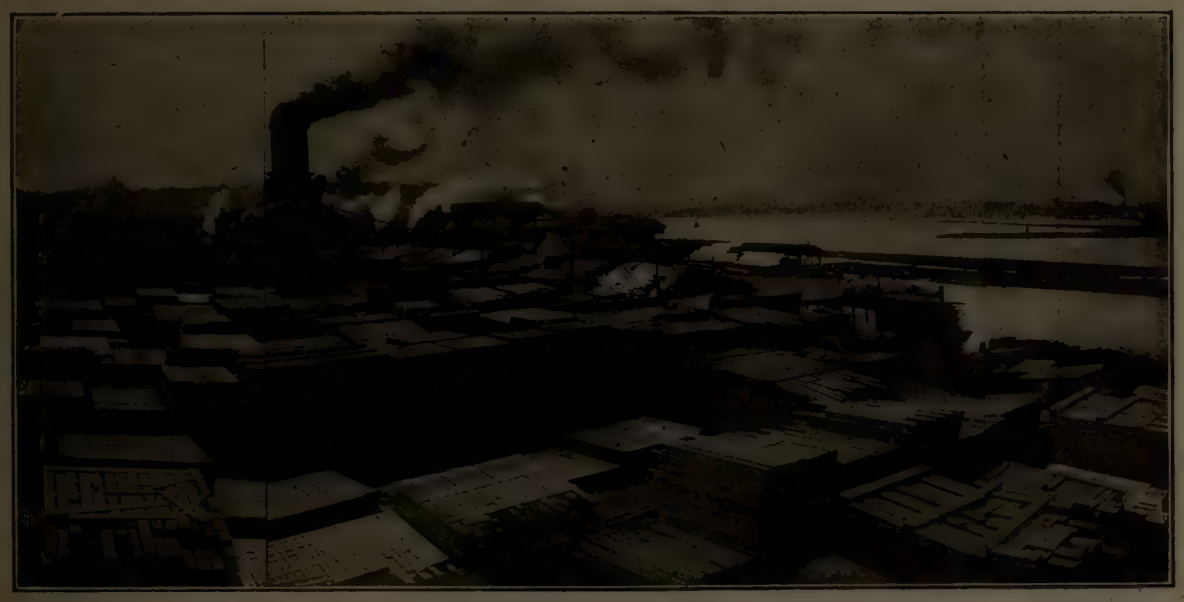
Ready to Ship

At Arnprior

50,000	1 x 4	12/16 Mill Run White Pine Strips
50,000	1 x 5	" " " "
50,000	1 x 6	" " " "
200,000	1 x 12	12/16 No. 1 Mill Culls
200,000	1 x 12	12/16 No. 2 "
100,000	1 x 8 and up	12/16 No. 1 Mill Culls
75,000	1 x 10 and 12"	6/16 No. 1 Mill Culls

The Long Lumber Company

Hamilton, Ont.



View of Yard and Fir Mill. Daily Capacity 200,000 ft.

Manufacturers of British Columbia FIR and CEDAR

Finish	Siding
Flooring	Finish
Ceiling	Ceiling
Siding	Mouldings
Mouldings	Shingles
	Timbers

Vancouver Lumber Co.

LIMITED

Eastern Sales Office—
701 Excelsior Life Bldg.,
TORONTO, ONT.

Representatives—
CHAS. PLANT
C. J. BROOKS

BATHURST

RAILWAY RATES REDUCED

¶ The difference in weight between Dressed and Undressed Lumber is from 350 lbs. to 800 lbs. per M. feet.

¶ If you buy Lumber in the rough the Railways charge for hauling the shavings.

¶ The loss is yours.

¶ Figure it out and see what you save in reduced transportation charges by leaving the shavings with us.

DRESSED LUMBER

¶ We have large stocks of Pine and Spruce Lumber, the product of three modern mills.

¶ Our planing mill at Bathurst turns out the best work.

¶ We can surface, joint, match, resaw and rip; our machinery is the latest and our workmen the most skilled.

¶ We can ship by rail or water.

WRITE FOR OUR LATEST STOCK AND PRICE LIST A-1

BATHURST

BATHURST LUMBER COMPANY, LIMITED

BATHURST, N.B.

BATHURST

Ten Band Mills to Serve You

Mills and Railway Connections

Fredericton, N.B.	Railway connection	C. P. R.
Plaster Rock, N.B.	" "	C. P. R.
Nelson, N.B.	" "	I. C. R.
Edmundston, N.B.	" "	C. P. R. or Temiscouata Ry.
Baker Brook, N.B.	" "	Temiscouata Ry. and N.T.R.
Glendyne, Que.	" "	N. T. R.
Escourt, Que.	" "	N. T. R.
Cabano, Que.	" "	Temiscouata Ry.
Whitworth, Que. (No. 1, No. 2)	" "	Temiscouata Ry.

Fraser Limited, Fredericton, N. B.

ROUGH AND DRESSED SPRUCE, WHITE CEDAR SHINGLES, SPRUCE LATH, PIANO SOUNDING BOARD STOCK.

Watson & Todd Limited
OTTAWA

SPECIAL—

100/125 M. Ft. Dry Norway Culls

3 x 4"/up 6/22 ft.

SEND US YOUR ENQUIRIES

The
Harris Tie & Timber Co.
Ottawa - Canada

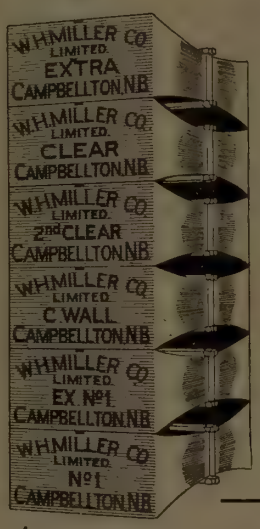
Lumber - Lath - Shingles

Cedar Poles and Posts

Railway Ties - - Piles

Let us quote on your requirements for

Spruce and Pine Lumber



We manufacture and export all kinds of it.

WE ALSO MANUFACTURE

LATHS and TIES

PULPWOOD

Shipments by rail and water

Prompt--reliable--carefully handled

We Specialize in

New Brunswick White Cedar Shingles

LET US QUOTE YOU

W. H. Miller Co., Limited
Campbellton, N.B.

Wilfrid H. Pauzé
LUMBER MERCHANT—SASH and DOORS

The

Largest Eastern Warehouse of British Columbia Products

I can supply at short notice mixed carloads of

Fir Doors, Columns, Mouldings, Red Cedar Clapboards and Shingles, Fir V-Joint Sheeting, Flooring

BEAVER BOARD DISTRIBUTOR

1822 Cote des Neiges - Montreal

Crescent Lumber Company
Cincinnati, Ohio

YELLOW PINE

— *SPECIALTIES* —

TIMBER - DIMENSION - FINISH

Inquiries Solicited

Milne, Hall & Johns Co., Inc.
502-3-4 Gerke Bldg. CINCINNATI, OHIO

Manufacturers of

Hardwood Lumber

OUR SPECIALTY

$2\frac{1}{2}$ to 6 in. **WHITE OAK**

Specially selected for WAGON and IMPLEMENT use.

Send us your requirements and we will quote delivered prices.

Fraser Bryson Lumber Co., Ltd.

Office, Castle Building 53 Queen St. Ottawa, Can.

Wholesale Lumber Dealers and Selling Agents for

Fraser & Co.

Mills at

DESCHENES - - - QUEBEC

White Pine
Red Pine
Spruce
Lumber and Lath

Austin & Nicholson

CHAPLEAU, ONTARIO

Lumbermen and General Contractors

Railway Ties and Pulpwood

PILING

Rough and Dressed Lumber and Lath

MILLS AT NICHOLSON, ONTARIO

Long Leaf Yellow Pine, Louisiana Red Cypress

Annual Capacity 350,000,000 Feet Yellow Pine
50,000,000 Feet Red Cypress

Nature's best in forest products

LET US QUOTE YOU PRICES

Up-to-date mills and unsurpassed **SERVICE.**

We are ***prepared*** to fill orders—try us.

CHICAGO LUMBER & COAL COMPANY

Manufacturers

General Offices: EAST ST. LOUIS, ILLS.

California White Pine
California Sugar Pine
and Arizona Soft Pine

Best Stock for Factory and Pattern Lumber

Ask **LOUIS WUICHET**

Room 716 Railway Exchange, CHICAGO, ILLINOIS

BASS WOOD

We offer for immediate shipment—
1" and 1½" Dry Basswood

DRY BIRCH STOCK

We offer in Birch End Stock—
1 x 8½" 1 x 9" and wider
1 x 6 and 7" 1½" to 4"

SPRUCE BASSWOOD
ASH HEMLOCK and PINE

HART & McDONAGH

513 Continental Life Bldg.
Phone Main 2262

TORONTO

FOR SALE

Standing Timber

in Large or Small Blocks

and

Sawmill Machinery

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Falconbridge and Street for small mills.

We have the following Sawmill Machinery For Sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.
1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.
1 Double cylinder steam nigger, right hand.
1 Log Loader for right hand mill.
1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.
1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.
1 left-hand steam nigger.
1 Log-loader.
1 Endless chain jack ladder with two kickers complete for right and left hand mills.
2 Roger Gang Edgers for 8-in. cants and lumber.
1 Waterous double edger, 6 saws.
1 2-saw Trimmer.
1 20-ft. Slash Table.
1 16-ft. Revolving Slash Table
1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.
1 Lath Mill with bolter.
2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.
1 Hand Machine for cut-off saws.

POWER PLANT

1 Double Duplex, high pressure Water Pump.
5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.
2 125 h.p. Water Wheels.
1 Upright Engine for sawdust conveyor.
1 10 h.p. Engine.
1 Wood Machine for 22-in. wood.
1 Edger for ripping dry lumber, installed.
1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co.

26 Ernest Ave. Limited

Toronto, Canada

Mill Yard.

Spruce, Tamarac, Whitewood and Poplar Lumber

SPRUCE AND WHITEWOOD LATH

Planing Mill in connection with Saw Mill

ROSSED SPRUCE PULPWOOD

Full supply of Seasoned Lumber always on hand.

RICH CLAY LOAM LANDS FOR SALE—Townships of Haggart and Kendry. District of Temiskaming. Excellent opportunities for the settler. Write for particulars.

New Ontario Colonization Company, Limited

Sales Office, BUFFALO, N.Y.

Mills:—Jacksonboro, Ont. Located on Transcontinental R.R., 32 miles west of Cochrane.

Books For Sale

SPECIAL PRICES

The Preservation of Structural Timber, by Howard F. Weiss. Published in 1915 by McGraw-Hill Book Company. 312 pages, illustrated. Price $3.00.

Scribner's Lumber & Log Book, 1917 Edition, Price 35c.

Baughman's Buyer & Seller, 75c.

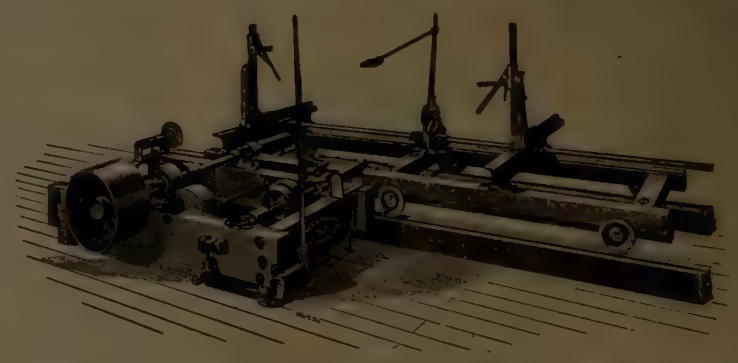
Utilization of Wood-Waste (Second Revised Edition), by Ernst Hubbard. Published in 1915 by Scott, Greenwood & Sons. 192 pages, illustrated. Price $1.50.

Canada Lumberman

347 Adelaide Street West

TORONTO

FISHER & DAVIS MFG. CO. St. Louis, Mo.



Manufacturers of the best quality of

Circular Sawmills and Sawmill Machinery

We specialize on mills of from 5,000 to 40,000 feet capacity.

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625 Birks Bldg.
F. W. Gordon, Mgr.

"T. & G. QUALITY Brand"
B. C. Cedar Shingles

Dressed Fir Lumber
Trim, Mouldings and Doors

TIMBER

Western Soft Pine
Western White Pine

Terry & Gordon

Wholesale Lumber Merchants

Head Office
704 Confederation Life Bldg., TORONTO, ONT.

Ontario Representatives of
The British Columbia Mills Timber & Trading Company
VANCOUVER, B. C.

Eastern Canadian representatives of
The Tacoma Fir Door Company Tacoma, Wash.

A FULL LINE OF ONTARIO FOREST PRODUCTS

Montreal, P.Q., Branch
23 La Patrie Bldg.
Leon Gagne, Jr., Mgr.

Quebec and New Brunswick
Spruce Lumber
and Lath

N.B.
Cedar Shingles

ONTARIO

Canada's Banner Province

Ontario's timber production last year valued at $26,774,937 or 40% of Canada's total output.

Pine production,	905,442,000 ft. B.M.
Pulpwood,	246,282 cords.
Railway Ties,	5,704,459.

Ontario's woodworking industries, using 34 different kinds of wood, provide a ready market for the lumberman. Eighty-two per cent. of lumber used in Ontario's industries purchased within the Province.

Ontario's vast resources offer unsurpassed opportunities to the lumberman.
For maps and full information regarding Ontario, apply to

HON. G. HOWARD FERGUSON,
Minister of Lands, Forests and Mines.

F. N. Waldie, President. R. S. Waldie, Vice-President. W. E. Harper, Secretary.

The Victoria Harbor Lumber Co., Ltd.

Manufacturers of

Lumber, Lath and Shingles

Mills at Victoria Harbor, Ont.

HEAD OFFICE.
12-14 Wellington Street East, TORONTO, ONT.

JOHN McKERGOW, President
W. K. GRAFFTEY, Managing-Director

The Montreal Lumber Co. Limited

Wholesale Lumber

Ottawa Office: 46 Elgin St.
Montreal Office: 759 Notre Dame St., W

James P. Grant
John K. Campbell

Grant & Campbell

Manufacturers of
SPRUCE, HEMLOCK TIMBERS AND PILING AND LATH

Prices promptly given on all enquiries.

New Glasgow, N. S.

FOR SALE

30,000 ft. 1 x 4 and up No. 2 Spruce, D1S.
60,000 ft. 5/8 x 4 and up Crating Spruce
50,000 ft. 1 x 3 and up Crating Spruce
50,000 ft. 1 x 3 Crating Spruce
200,000 ft. 1 x 4 No. 2 Jack Pine.
500,000 ft. 1 x 5 and up No. 2 Jack Pine.
800,000 ft. 1 x 4 and up No. 2 Jack Pine
100,000 ft. 1 x 12 No. 1 Mill Cull White Pine.

Also Hemlock and Pine.

JAMES R. SUMMERS
Wholesale Lumber Merchant,
95 King St. East TORONTO

Lath Wanted

We are Buyers of
ALL GRADES
WHITE PINE, SPRUCE and HEMLOCK LATH
Will contract for entire output and pay spot cash
Send full particulars as to grade, quantity and prices

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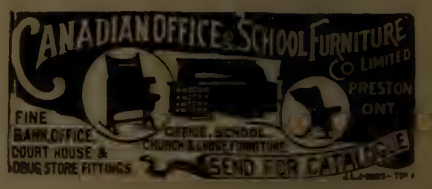

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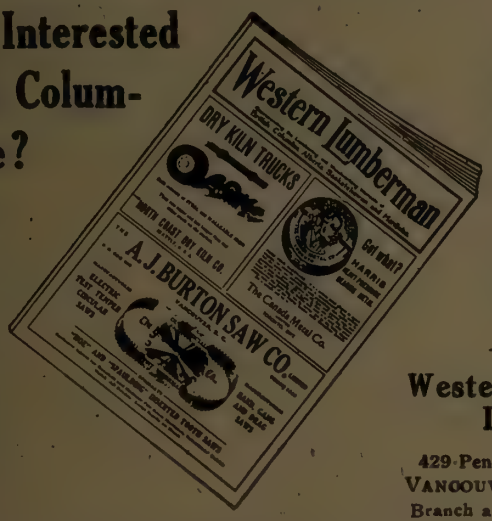

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40 Million Feet Dry Stock in pile containing a complete assortment for rush shipment.

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Yards at—Nashville, Tenn. Basic, Va. *Mills at*—Sumter, S.C. Winchester, Idaho

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Fordyce Lumber Company,	Fordyce, Ark.		Aakansas Lumber Company,	Warren, Ark.
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2 Cars 4/4 L. R. Mill Culls out Canadian Plain Red Oak, real nice stock.
Also 5/8 in. and 1 in. Spruce Crating.

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Gentlemen:

In reply to yours of the 18th, we are pleased to state that the No. 91 Matcher is giving excellent results in surfacing stock two or four sides at a feed of 250 feet per minute and in running pattern stock, such as shiplap, drop siding, etc., at 150 lin. feet per minute. The machine has been giving us no trouble in operation and its work, at the speed mentioned, is, we think, beyond criticism.

Yours truly,

BROOKS-SCANLON LUMBER COMPANY,
J. B. Keyes, Gen. Mgr.

To P. B. Yates Machine Co.

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Issued on the 1st and 15th of every month by

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TERMS OF SUBSCRIPTION

Canada, United States and Great Britain, $2.00 per year, in advance; other foreign countries embraced in the General Postal Union, $3.00.
Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster-General for Canada, for transmission as second-class matter.

Entered as second-class matter July 18th, 1914, at the Postoffice at Buffalo, N.Y., under the Act of Congress of March 3, 1879.

Vol. 37 **Toronto, July 15, 1917** **No. 14**

The Proposed Freight Rate Increase

The fact that the Interstate Commerce Commission of the United States, after making a thorough enquiry, has decided to refuse the railways of the country permission to make a flat rate increase of 15 per cent. in freight rates, ought to carry some weight with the Dominion Board of Railway Commissioners, who have a similar request before them from the railways of Canada, and it also ought to give those who have been inclined to permit the Canadian railways to make the increase under certain conditions, reason for considering whether their views should not be revised. Possibly the conditions in the two countries are sufficiently different to make such an advance advisable in Canada, but not so in the United States; though many lumbermen and other business men doubt it. The most reasonable point of view to adopt in Canada seems to be that the railways are starting at the wrong end. They are asking for an extensive increase, but are giving practically no assurance of relief to the long-suffering public who are paying practically two prices for everything they consume to-day, largely on account of the inability of the railways to handle the country's traffic.

What the people of Canada would like to have before paying such a radical increase of freight rates is an assurance that the railways intend in the future to act otherwise than they have in the past, when they milked the public as dry as they could and starved the transportation services of the country. It is notorious that the equipment of the Grand Trunk Railway and the Canadian Northern Railway to handle the traffic they are designed to handle, is absolutely inadequate, and that for this reason we are facing in Canada to-day a coal famine and a great food scarcity. Should not the Dominion Board of Railway Commissioners devote their attention first of all to securing from the railways an assurance to be depended upon that this unbearable situation will be remedied, before attending to their request for increased freight rates? If the freight rate increase would actually improve the situation, many Canadians would be willing to grant it, but we have no assurance of this nature. Nothing short of a statement from the Railway Commission that the railways have been bound hand and foot to increase their equipment and ability to handle the country's traffic should put the people in a frame of mind to agree to an increase in freight rates. Unpleasant as the idea seems to many Canadians, the sentiment in favor of public ownership, or at least public operation of the railways of the country is increasing rapidly to-day, and will increase more rapidly, unless the railway companies can bring forward proof that they are dealing with the problems they now have to face, in a manner which will give promise of early relief.

The railway problem in Canada is a large one, complicated by the most unfortunate history that it is possible to conceive, yet surely it is not too big a problem for the people of Canada to solve. If the Railway Commission, not able to compel the railway companies to give us relief from the anxieties we feel to-day, it is either in need of greater powers or new blood.

It is hard to appreciate the point of view of some eastern Canadian business men, who have expressed an opinion in favor of allowing the railways to charge the increased rates. Probably they looked at the matter for too short a time before expressing their opinions. Probably also, they were so upset by their long series of troubles with the railways that they concluded too hastily that it would be well to try the increases out, in the hope that it might help the railway companies to catch up with the business. In view of all the failures of the railways in the past to cope with the growth of traffic, it is the most unlikely thing in the world that even with the increased freight rates they would make any better showing so far as the shipping public is concerned, and many lumbermen who have not given their acquiescence to the idea are convinced that it is the duty of the railways to give good proof of their ability and intention to remedy matters, before considering their request.

In the United States, the situation when the request for increased freight rates was first made, was rather similar to that in Canada to-day. It was pretty nearly the unanimous belief at first that the railways would have no difficulty in obtaining the advance. The lumbermen of the west coast, however, laid the matter so forcibly before the Interstate Commerce Commission that it was persuaded that the railway companies were not entitled to the increase. The case presented by the western lumbermen was so conclusive that there is now a general feeling that the United States railways will not make another attempt to increase the rates.

The Cost of Replacing Stock Sold

There ought not to be any two opinions regarding the proper basis of figuring the cost of a certain stock of lumber or of any other goods that are to be sold, but it frequently happens nowadays that many a firm which thinks it is selling its goods properly, is really disposing of them at a loss, because it is figuring the cost of the actual goods which are being delivered, instead of figuring on what it will cost to replace them. Now and then you will hear someone say that he thinks the dealer is not entitled to raise the price of goods that he has in stock when the market price advances, but the same man will see the matter in quite a different light when the market is on the decline. If he is a purchaser he will hold out stoutly for the benefit of the drop in price, and if he is a dealer he will find that, in nine cases out of ten, he is obliged, by the customer's knowledge of market conditions, and by the activity of competition, to lower the price. If the dealer is to get the heavy end of the stick on a declining market, he is entitled to the other end when prices are going up, and if he does not make a point of charging sufficient for his stock to give him a profit upon what it will cost him to replace it, he will be making nothing to protect himself against the loss of the periods of falling prices.

Conditions in the trade to-day, make it of vital importance to apply this principle in price quoting. Advances in price have taken place so rapidly of late in some cases, that the dealer who does not consider the cost of replacing his stock may find that he is losing in more ways than one. If the volume of trade that can be carried on with a given amount of capital is reduced in proportion to the in-

creased cost of the goods which he has to purchase, and if he is not obtaining enough to enable him to replace what he has sold, he will be gradually freezing himself out of business, as well as profits. The crux of the situation is the fact that when prices are being revised downward the dealer has no choice. This ought to be his guide when prices are advancing. Competition is the real factor, and it obliges him to give the consumer the benefit of the drop. He may be able to replace his stock later, at an even lower price, but in the meanwhile he is losing his profit on the one transaction, and if he continues doing business in this way he will find that some day, when prices strike bottom and commence to advance again, he has been doing business for nothing and is in a bad way to face the new conditions of the rising market. The matter is one of simple business arithmetic, but it is often overlooked by men who ought to know better.

Consideration of this point brings out another, namely, that a fluctuating market, whether it is going up or down, is a difficult one to handle. Some people will do well out of it and others will not, but the greatest average success in business will be achieved during times when prices are steady. It is better for all concerned, that the manufacturer, the wholesaler and retailer should know fairly accurately how much they can count upon receiving for their stocks, and that the consumer should know equally well how far he can make his money go. Business is encouraged by such conditions, whereas consumption, upon which business depends, is restricted to a considerable extent, by uncertainty in the price situation.

To-day, every lumberman is thinking more or less frequently of two things, first, his present transactions, and second, the situation which he will have to face when the war is over and the business world turns its course towards normal peace activities. Men are all trying to analyze that situation in advance, as far as they can. There is a pretty general impression that lumber will suffer less in the way of reaction than most other lines, because of the fact that there will be an immediate and world-wide demand for it for reconstruction purposes, and because the restricted output during the war will have enabled most producers and dealers to enter the peace period with comparatively small stocks purchased or produced at high prices. The needs of Europe will be so great that there is likely to be ample time for anyone to get safely out from under any load of high priced stock that he may be unfortunate enough to carry when prices commence the return trip toward a normal level. The very fact that this turn in the tide is expected as an inevitable result of the return to peace, is one reason which should awaken those who are not basing their present prices upon the cost of replacing their stock. Even though the transition to normal conditions may be slow, it is none the less certain, that only a sound method of price quoting will put a man in a position to enter the new situation safely.

This is not an argument in favor of price boosting or an attempt to discourage the trade in regard to the outlook, but is an expression of ideas that have impressed us in conversation with many lumbermen. Basing prices upon the cost of replacing stock is just as sound a business principle as that of figuring one's profit upon the selling price, instead of the delivered price. It is just one of those matters which have a way of appearing to be less important than they really are, until one comes face to face with their consequences; and upon which it is possible to come to grief very rapidly, unless one adopts invariably the only safe and sensible viewpoint.

Business and Patriotism for the Retailer

Economy is the order of the day, and many a line of business is feeling the adverse effect of the necessity which falls upon everyone to revise his standards of living so as to make his money go as far as possible. There is such a thing, however, as economy which defeats its own purpose, and one of these is the refusal to spend money which would increase one's capacity either to produce or to serve. It is a duty incumbent upon all of us to-day to see that not only in our savings, but in our spendings, we serve the public as well as our own private interests, to the best of our ability. Increased production of foodstuffs is being urged, and the farmer is doing much to meet the exceptional strain put upon him and his resources. Short-handed as he never was before, he is finding it difficult to produce, harvest, store and ship the increased output that the sountry requires from him. There are not many directions in which the lumberman can assist the farmer in this crisis. Production, harvesting and shipping, are largely problems of labor and equipment, with which the lumberman has little to do, but when the question of storing the output of the farmer comes up, the lumberman becomes a factor. To store the great output of grain and other crops that will be produced this year in Canada, will require greater facilities than most of the farmers of the country possess, even in those well-settled parts of the country where the farmers are well equipped for handling their production during normal years.

In former years, most of the grain production of the Canadian West has found its way to the markets of eastern Canada and Great Britain, almost direct from the fields to the markets. A stream of cars and vessels, transporting it across the Canadian Prairie and over the Great Lakes, has made it possible for the farmer to count upon disposing of his product without spending much upon storage facilities. To-day the situation is greatly changed. Lake tonnage is very scarce, principally because suitable vessels have been transferred to ocean traffic, and the vessels which are left upon the Lakes find such a great demand for their space for the shipment of ore, that as a grain carrying fleet, their usefulness will be much reduced. The railways, besides, are overtaxed and under-equipped for handling the heavy traffic of to-day. Even if the transportation facilities of the country were given over in their entirety to the moving of grain, munitions, and other materials required on account of the war, it would be impossible this year for them to move the western grain crop, as it has been moved in former years. Inevitably much of it will have to be stored to await transportation at a later date. In a large measure the same conditions will prevail in Eastern Canada.

What sort of shape are the farmers of Canada in for such a development? Undoubtedly they must spend a great deal of money upon building storage facilities if they hope to protect their crops until the railways and steamships can move them. The retail lumber dealer has a duty to perform in this connection, which fortunately for him is also a good business move in his own interests. Present conditions point to a crop of greater than average proportions, and even with normal transportation facilities this could not be moved this year in time to avoid storing much of it, for some months at least. Do the farmers realize this now? Probably many of them do not, and the retail lumber dealer ought, whenever he can, to show the farmer that the country requires him to put up storage buildings. It is a duty as well as an opportunity for the retail lumberman to busy himself along this line. What will it profit the country if the farmer raises a great crop this year, and a portion of it is allowed to perish because of inadequate storing facilities? For the retailer, therefore, there is a definite line of business and a patriotic duty to-day. He should direct his attention to the farmer as he never did before. He should talk the matter over with every farmer he can; discuss with him his bin room, granary equipment, silos, and storing facilities generally, according to the nature of the crops that are being raised in his neighborhood. As a means of preserving the food supplies of the nation, well-planned storage buildings, constructed of wood, should play a great part during the balance of the war.

Under present conditions it should be an easier matter than usual to induce the farmer to see matters in this light and to spend money upon lumber. Everything the farmer reads, whether in his newspaper or in his farm journals is preaching the same lesson to him. His mind is pretty well prepared in advance for the ideas that the retail lumberman will put to him, and if he is expecting a large crop he is almost certain, in nine cases out of ten, to have become anxious already about how he is going to take care of all of it until he is able to get it shipped. The time never was more opportune for the lumber dealer to help his neighbor and his country as well as himself.

B. C. Office at Toronto Closed for the Period of the War

The office of the British Columbia Lumber Commissioner at Toronto, has been closed, probably for the duration of the war. The lumber trade of Ontario will regret greatly that the British Columbia Government have found it advisable to take this step and will hope that, in the near future, conditions will warrant the re-opening of the office which has been of great service to the trade. Under the direction of Mr. L. B. Beale, the British Columbia office at Toronto has not only given the Ontario trade a good idea of the excellent qualities of B. C. forest products, but has established their use quite firmly among Ontario consumers. Not the least of the many benefits developed from the work of the B. C. Commissioner at Toronto has been the improvement in the business relationships between the west and the east. In fact, the work of the Commissioner has been so valuable in many important directions that it can scarcely be doubted that the British Columbia Government will re-open the office at the first moment when they consider that conditions justify them in doing so.

Canada's Forest Products Industries

In a paper read recently before the Canadian Society of Civil Engineers at Montreal, Dr. John S. Bates, superintendent of the Forest Products Laboratories at McGill University gave a general survey of forest products in Canada. While there was nothing that can actually be termed new in the address, it contained an interesting review of the whole situation. Canada is considered the third country of the world in value of forest resources, Dr. Bates said, Russia coming first and the United States second. Canada's present supply of merchantable timber is only one-fifth or one-fourth of the supplies still available in the United States.

In the list of Canada's natural resources agricultural field crops hold the first place in value of production with an estimated total of from $700,000,000 to $800,000,000 annually; forest products come second with at total of about $175,000,000 for the primary products and this figure is considerably increased if paper and other manufactured products are included. In 1916 the exports of products from wood amounted to approximately $100,000,000, not including the minor proportion of specially manufactured wood articles showing the place which our forest resources will take in helping to overcome the war debt. According to the census of 1911 the capital invested in timber and re-manufactures amounted to $259,889,715 in 4,999 establishments, this being the highest figure on the list. In addition the paper and printing trades accounted for an invested capital of $62,677,612 in 773 establishments.

By far the most important and extensive utilization of wood consists in the manufacture of lumber and other products by mechanical processes, whereby the wood still retains its identity. Under the heading of wood used in the rough, firewood takes first place, and in value accounts for about 30 per cent. of the primary wood products. The annual normal consumption of railway cross-ties in Canada is about 20,000,000, with an average value of about 45 cents each.

The annual consumption of round mine timber is over 53,000,000 linear feet with a total value of $524,000, while the mines consume sawn timber to the extent of 23,000,000 feet board measure, valued at about $304,000. The term lumber is used to include a wide range of material and constitutes the most important manufactured product. A large proportion goes directly from the sawmill into general building and construction without passing through an intermediate woodworking factory. In 1915 the lumber cut in 3,239 mills totalled 3,842,676,000 feet board measure with a total value of $16,919,806, which includes a good deal of structural timbers.

Special mention should be made of the by-products of the lumber industry, since they constitute an enormous amount of wood material which for the most part is now going to waste. Utilization is retarded in Canada on account of the scattered population and limited markets, as well as the technical nature of many of the processes. It is estimated that the logging waste which is left in the woods represents about 25 per cent. of the original tree. Obviously the opportunities for utilization are limited and the main problem in Canada at present is to enforce rightly the proper burning of slash in the wet seasons to remove this serious fire hazard and leave the woods in better condition for second growth.

Sawmill waste amounts to about 40 per cent. of the original tree, so that the finished lumber on the average represents from 30 to 35 per cent. of the tree. New developments in the utilization of wood waste are being made continually but it is false economy to handle waste unless the by-product industries can be carried on at a profit. Effective utilization calls for a variety of chemical and mechanical processes which must be adapted to the form, species and quantity of wood waste available at any point. Slabs, edgings and trimmings represent 15 to 17 per cent. of the tree. Sawdust accounts for another 11 per cent. A recent development is the use of spent hemlock bark for mixing to the extent of about 30 per cent. with rag stock in the manufacture of roofing felts. Experiments on its use in wallboard, industrial pails, conduits and wall-paper give promises of success.

An extensive portion of the address related to the pulp and paper industry, the distillation industry and minor industries. Canada now has a total of 90 pulp and paper mills, many of which are large and of modern design. The export figures for the calendar year 1916 show that pulpwood, wood pulp and paper produced have increased in value to nearly $50,000,000, or about half of the total export value of forest products, with the exception of the small proportion of specially manufactured articles.

Colonial Lumber Company Arranges for Its Cut

In a letter to the Canada Lumberman, under date of July 6, the Colonial Lumber Company, Ltd., Pembroke, Ont., say:

"The insurance on our sawmill which was recently destroyed by fire amounted to $76,000. The mill was very well insured, although, of course, the loss was severe at this time of year, owing to our losing the season's work at our plant. We had been running about four weeks, and had cut about 3,500,000 feet at the time of the fire. The mill was just getting warmed up in good shape for a season's work. All efforts to find out the cause of the fire have been fruitless. An investigation was held by the insurance companies, the fire marshal, and ourselves, but failed to develop anything that would give us a line on the cause.

"Arrangements have been made with the Pembroke Lumber Company whereby we turned our crew over to them. This enabled them to run day and night shifts, and they are to cut not less than 10,000,000 feet for us this season. We are letting through three or four million feet of logs, to be delivered at R. & T. Ritchie's mill at Aylmer, P.Q., where we expect we will saw the greater portion this year. Ritchie's mill is now running on Colonial logs, and will probably have a million or two million feet out before they run short, awaiting the next supply of logs. Mills along the river are offering to cut logs for us next season, 15,000,000 to 20,000,000 feet altogether.

"As to our rebuilding, we find it very difficult to purchase machinery under present conditions, and the prices asked are extremely high. The labor situation is another problem to be reckoned with. We hope we may be able to rebuild, but whether we will make a start this year or not has yet to be decided on."

Twelve Months' Foreign Trade in Lumber

Canada's imports and exports of wood manufactures of wood during twelve months ending March 31, 1917, and 1916, were valued as follows:

		1917.		
Imports.	1916.	Total	From Un. Kingdom.	From Un. States.
Unmanufactured—Fence posts and railway ties.	$ 645,606	$ 808,641	$.....	$ 808,641
Logs	325,967	598,417	.....	598,417
Lumber	3,584,980	4,617,010	5,261	4,599,959
Other manufactured wood	903,552	1,185,174	8,023	1,158,205
Manufactured — Furniture	778,387	1,019,336	37,484	941,220
Wood pulp	406,749	651,311	.....	651,311
Other manufactured wood	1,977,181	2,609,872	320,483	2,138,497
Exports.				
Unmanufactured—Logs	$1,078,999	$ 824,155	$ 69,954	$ 753,688
Lumber—Deals, pine	1,249,595	1,574,279	1,454,461	105,476
Deals, spruce and other	9,677,355	10,340,039	8,594,803	290,158
Laths	2,246,777	2,008,068	416	2,002,227
Planks and boards	23,880,341	25,976,526	2,316,849	21,497,341
Scantling	1,535,731	2,389,294	1,244,345	815,104
Shingles	3,644,159	4,047,232	.....	4,007,092
Shooks	460,681	545,194	454,917	4,832
Other lumber	658,334	682,664	300,147	282,478
Pulp wood	5,743,847	6,448,189	.....	6,448,189
Timber	478,409	325,192	280,631	38,345
Other manufactured wood	548,742	703,707	67,980	626,136
Manufactured — Furniture	397,226	344,418	57,332	33,292
Wood pulp, chemical	6,801,011	14,032,920	2,677,923	11,107,819
Mechanical	3,575,537	6,371,133	379,488	5,487,424
Other manufactured wood	725,099	564,709	359,517	120,453

The dates for holding the ninth session of the Pacific Logging Congress have been set for October 18, 19, 20, the meeting this year to be in Seattle, Wash. An excellent program is now under preparation.

Give Good Service and Advertise It

A Strong Example of Service Publicity, Together with Some Striking Thoughts About How to Render it Successfully

When you read something in these columns about "service" does it generally appeal to you, or do you say to yourself that the editor is working the "service" hobby overtime? Much as the "service" idea has been discussed here and elsewhere, probably only a small portion of the trade have got its importance and its real elements properly fixed in their minds. The smallest part of service is that of providing a well-stocked yard and delivering the goods ordered. The greatest part is the use of the personal element in such a manner as to create in the customer's mind a fondness for doing business with you. Personal favors may be one of the factors, but the less they appear in the garb of favors and the more in the garb of something to which the customer is entitled the greater their drawing power will be. It is a difficult matter to specify the elements of this business-drawing in so many words, but recently it was put forward strikingly by C. H. Ketridge in the Mississippi Valley Lumberman, in the course of one of his inimitable talks to retailers. The best way in which we can tell our own feelings on the subject is to repeat his remarks.

There is so essentially a practical side to "service" that, in developing it, a retail lumber dealer should bear in mind continually its value as a subject for use in advertising. There is not much sense in doing a lot for your customers and at the same time running an advertisement in the local paper consisting of your name and address, followed by the words "Lumber, Lath and Shingles." If you are doing all you can to help your customers to get the best value out of what you sell, you owe it to yourself and to prospective customers to talk about it in advertising, designed to impress the reader with the fact that a firm's "service" is something valuable to him. The accompanying advertisement is one of a series published in local newspapers by a progressive retail firm which has established a far-reaching reputation for giving good value in both goods and service. We intend to reproduce a few other examples of the same firm's advertising in later issues. "John Doe," of course, in the advertisement is a substitution for the real firm's name, they being too modest to desire publicity of this nature.

Farmers Appreciate Service

In his article on "Service" C. H. Ketridge writes as follows:

"A good share of my life has been spent on the farm and living in country towns, and I know how much the country folks appreciate a kindly personal service by a business man, and when you run across a lumber dealer who is getting the biggest share of the business in the town you may know that it is by reason of his being always willing and ready to do a personal service to anyone who needs it and do it voluntarily and without asking. I have known of several such men. They were not much on education or the knowledge of keeping books. They didn't even know the cost of doing business. You couldn't tell them by their dress from one of the yard men, but, all the same, they drew men to them and held their trade in spite of all competition. It was not what we call "modern service" that they gave, but it was a service of the heart, and the whole community shared in it. Business service is all very well, and valuable as far as it goes, but there is a service apart from business that is worth far more and brings more business than the other kind. It comes from a personal attachment to the dealer. It is made up of the little things in the human equation and the kindly touches of a personal interest. It is something that distinguishes a business man from what we call 'a good mixer.' Many are 'good mixers' in a certain way, but they lack that quality which causes men to give them the confidence of friendship and love them for their qualities of the heart.

"I have in mind a good illustration of this in the person of an employe in one of the large retail yards in this locality. His position was the outside soliciting agent for the yard. I have met him several times. There was nothing in his personal appearance that was particularly attractive or striking. In manner he was very quiet and unassuming, but when he talked in that soft, low voice of his I couldn't help but feel the charm of his personality. The first time I met him was one day when I was on an exercise hike and he came along in his machine and stopped and asked me to take a ride with him. He knew who I was, but he was a stranger to me. Afterwards I called at the office, and when he was there he was more to me than the manager himself was, because I found he had a broader knowledge of men and of selling lumber than the manager had. I never heard him say an unkind word of anyone, nor a word that was a 'knock' at a competitor. A few weeks ago I was shocked to learn of his sudden death and burial at his former home in a little country town.

"A fellow-employe in the office met me on the street and told me this, and forthwith began to tell me of Joe's ways of getting and holding the trade. Every carpenter and contractor knew him and was his friend, because of his kindly manner and ready disposition to do them many little favors that were not particularly in the line of business. If he knew of a poor workman who lived several miles from his job he would stop at his house and take him there in his machine. Sometimes he would take the carpenter's children along for a ride and bring them back. Lots of little favors he did the contractors, also, that he really was not obliged to do. He never sold them a bill under any false or tricky representation. As a consequence he controlled a large amount of non-competitive trade which came to the yard because of his personal influence and reputation among the contracting and working men in the building business. The common people loved him, and that is the most appropriate epitaph that can be placed over his grave. He was not known in public life, nor was his name spoken of in the papers, but he was the real head of the yard of which he was subordinate employe. Such a man is not often recognized at the time for his real worth to the business. He earns his salary many times over, but he does not think of this, nor do his employers appreciate it to the extent of raising his salary.

"There are some country yards where the second man has more influence for the drawing of trade than the owner or manager has, and this is by reason of their kindly ways and doing little kindly actions in a voluntary manner, which, in a way, they are not obliged to do. Farmers drive to the yard because 'Bill' or 'Jim' is there, and they

John Doe Service Means Something

JOHN DOE SERVICE is the big word that the folks of this community and for miles around are appreciating more and more every day. JOHN DOE SERVICE means more than mere barter. We do not and will not take your hard earned dollars and simply give you mere merchandise in exchange. If that is all we were in business for, we would lock up and throw the keys away. Most any concern can give you mere merchandise in exchange for your money. That is not the JOHN DOE LUMBER Co. aim and never will be. We go a great deal further than that. Our service is one that really serves, that gets down to brass tacks with buyers of lumber and building material. Our service paves the way for the scientific and economical purchasing of supplies. We show the ways in short cutting expenditures. We explain to you the modern methods of buying. We study your building needs, we assist you in giving you facts and figures in building estimates. We explain how to purchase what you need and to eliminate what you don't need. We give you first quality merchandise in accordance with your specifications. Our service really serves and you may share in its many advantages 365 days in the year. Bring your building problems to us. Let JOHN DOE SERVICE help you solve them. You will be surprised. You will be delighted. It's the modern way of modern progressive business by a bristling and modern progressive Lumber Company.

John Doe Lumber Company

know they will be waited on in a pleasant, agreeable way. He helps the farmers' wives out of the wagon and puts their things in a safe place while he puts the load in. He is the friend of everybody, even the fellows in the other yards, and would do them a favor, too, if it came to his hand.

"In every yard or place of business there is some one individual who is the principal attraction to the people who trade there, whether it be the manager, owner, or a subordinate employe, and it all comes from the exercise of sympathetic understanding and willingness to oblige. As I've remarked before, this is a heart service, and is recognized by everybody, but, strange to say, not everyone is capable of giving it, because they are not temperamentally so inclined. It is not their nature to be unselfish. This, however, does not prevent them giving what is known now as business service. Every merchant does this, in a more or less effective way. And it is in the further development of this kind of service that lumbermen to-day are being educated. But heart service and business service should be combined as much as possible. The latter may create business, but the former will draw it to the yard and hold it.

The Public Abuse of Service

"Some few weeks ago I made mention of the tendency of the public to abuse the service rendered by the business men. Such service as free delivery, loaning and exchanging of goods, extending credits, and other things relating to service given to customers for the purpose of attracting and keeping their patronage. In giving this service we must always reckon on the fact that it will be abused, because it is human nature to take an undue advantage of what is offered without cost. Everybody won't do this, but you can depend on a percentage of people who have this element of human nature developed in a larger degree than others. But this kind of heart service I have spoken of is rarely taken advantage of by anybody. One peculiarity of giving a service is that at first it is regarded and appreciated as a favor, but after a time it gets to be an old story and a common thing to do. The public comes to regard it as a right which the business man is bound to give as a part of his business, and therefore it is not construed any longer in the light of a favor. One of our modern business maxims is 'The customer is always right.' Everybody who has to do with the retailing of merchandise to the public knows that only a part of this is true, and the merchant who adopts it knows this to be a fact. In reality he only assumes the customer to be always right for the purpose of advertising his liberality in doing business. It is a pleasant fiction for 'soft-soaping' the public. Like everything else of the kind, however, the general pubilc has to pay for those who are not 'always right.'

"Not long ago I was in one of our local department stores, and I asked the manager if he had ever estimated how much the abuse of service cost him in a year's business. His reply was that it cost on the average $9,000 per annum, and it was figured in as one of the items of the cost of doing business, which, of course, meant that the patrons of the store had to pay for it. In some of the large stores in Chicago it runs over $100,000 a year, and it was increasing at such a rate that steps have been taken to modify the false assumption that the customer is always right in making a lying statement to the store.

"I have sometimes wondered how the privilege of taking home lumber and returning it would work with the lumber dealer. Some of you know how it is when you loan lumber for holiday celebrations, dancing floors for the boys at picnics, and for other similar uses, and there is a shortage when returned, but the boys will swear it was all that was brought out. You know, again, the claims for shortage on bills you have delivered, when you are positive you checked out the right amount when it went from the yard. How often is the customer right in these cases? How often is he right when he claims you must have made a mistake in weighing his coal, or that he is sure he has paid you some on account which you have not credited him for?

"I believe it's the right thing for a dealer to do when he discovers an error he has made to rectify it, whether the customer knows of it or not, but I don't think he should allow himself to be imposed upon by false claims when he knows that they are false. I think he should do all he can to clear up any alleged mistakes, and make it plain to the customer he is in error. I never could stand for anyone trying the grafting game on me, and that is what most of this abuse of service amounts to. You lose your respect for anyone who tries it on you, and when people find you are 'easy' they lose their respect for you. Every merchant at heart knows that the customer is not always right. It is only the scramble for business that has formulated such a false assumption, and somebody has to pay for it."

O. F. Bryant, of the Forest Products Laboratory of Canada, was a recent visitor to the Forest Products Laboratory at Madison, Wis., and evinced a deep interest in the work so far undertaken. He predicted that in a very few years Canada would be supplying the United States with all of its supply of newsprint paper. He says Canada has the cheaper wood and the cheaper power.

The Enquiry Corner

Answers to Questions by Readers
Can We Help You?

Ontario Terms of Sale and Grading Rules

Editor Canada Lumberman:— Sault Ste. Marie, Ont.

Will you kindly advise me regarding the usual terms of sale used in Ontario from manufacturer to wholesaler, and to retailer? Also, can you advise me where to procure a copy of the hemlock and white and Norway pine grading rules as used in this district? Herbert E. Stiles.

There is no uniformity of practice in regard to terms of sale in Ontario between manufacturer, wholesaler and retailer. Most of the wholesale lumber dealers, however, are now allowing 2 per cent. 30 days, or 90 days net. Some will not sell except on the basis of 2 per cent. 15 days; and a few wholesalers are demanding net 30 days.

Between the manufacturer and wholesaler the terms in use are even more varied than between the wholesaler and retailer. In fact, they are entirely a matter of bargain, even the date of settlement not being fixed. Some mills require settlement on December 1; others on January 1, and many of them on January 15. Usually a 2 per cent. discount on shipments and final settlement is allowed.

There are no official grading rules for hemlock, white and Norway pine in Ontario. A set of rules that have been pretty widely commended was drawn up in 1912 by a few Ontario lumbermen and submitted at the annual meeting of the Canadian Lumbermen's Association by Mr. W. J. MacBeth. These rules were discussed, but not adopted. They are embodied in the report of the Association for that year and a copy may possibly be obtained from Mr. Frank Hawkins, Secretary of the Canadian Lumbermen's Association, Castle Building, Ottawa. There has been quite an enquiry for these copies, however, and they are almost out of print now.

Personal Paragraphs

Mr. Joseph G. Mayo, former assistant general manager of the Mattagami Pulp and Paper Company, Smooth Rock Falls, Ont., has rejoined the company as assistant to Mr. S. R. Armstrong, general manager.

George E. Harrison, manager of the Vancouver, B.C., branch of the Merchants Bank of Canada during the past twelve years, has joined the Whalen Pulp and Paper Company, which controls interests on Swanson Bay and Mill Creek, B.C. Mr. Harrison will act as comptroller of the organization.

Mr. Robert Cox, the well-known lumber exporter of Ottawa, visited Toronto early in July. In conversation with local wholesalers he stated that stocks of spruce at Liverpool are very low. His own stocks there consist only of a few 3rds, all the 1sts, 2nds and 4ths having been disposed of. Mr. Cox looks forward to the development of a great demand for Canadian spruce as soon as the British Government removes the embargo upon its importation.

The Harris-Brooks Lumber Company has been incorporated under the laws of Mississippi, with head office at Meridian, Miss. Those interested in the new company are:—Frank H. Harris and W. H. Harris, of the Frank H. Harris Lumber Company, Toronto, and C. K. Brooks, of Meridian, Miss. The new company will deal in yellow pine. They will open a yard at Meridian, where they will carry extensive stocks. The chief object of the company will be to develop trade in the United States, which will enable them to dispose of stocks that they cannot sell in Canada. By this means their purchasing operations will be greatly facilitated, as they will be able to handle a much wider range of grades than was possible when catering solely to the Canadian trade.

No Fifteen Per Cent. Freight Increase in the United States

The Interstate Commerce Commission of the United States has suspended the tariffs advancing freight rates on United States railroads approximately 15 per cent. throughout the country. The commission declares that no showing has been made by the railways that they are in need of the added revenue. The admission was made that the Adamson Act, granting increased wages to railway employees, had not materially increased operating costs on Southern and Western lines, but had made the increased revenue necessary on the Eastern lines. The only increases granted were to Eastern and Southern roads on coal, coke, and iron ore, and on some of the class rates. A great factor in the determining of the case was the statement presented before the commission by Pacific Coast lumber shippers, showing that the railway companies were not entitled to the advance.

Timbers Used in Aeroplane Work

Silver Spruce and Ash the Most Useful—Oak Quite Out of the Running—Hickory Good for Skids

The construction of aeroplanes, though given a wonderful stimulus by the war, is still far from being standardized. Materials, sizes, designs, etc., are undergoing frequent alteration, though the varieties of wood used are becoming settled to a considerable extent. The practice in Great Britain is outlined in a discussion of the subject recently published by The Cabinet Maker, which says:—

The majority of constructors, even those with the best scientific and technical training, started with very little knowledge of the physical properties of various kinds of timber, and although many of them had mechanics supposed to be familiar with the merits and demerits of some woods, the information to be obtained from even the most intelligent worker lacked precision.

The timber merchant with even a smattering of knowledge of mechanics and physics can at once see that most tables as at present compiled give but doubtful aid to the designer. The values given are generally too precise. The compilers have attempted to tabulate tests on timbers as if they were embodying results of tests on metals, so that mathematically inclined constructors may in designing wooden parts be led to credit the tables with equal definiteness and validity with regard to ash, say, as with respect to steel.

As a rule, in tests on timber of small dimensions, "perfect" timber is used—"perfection" here meaning absence of knots; obviously it would be stupid to compare a knotty piece of ash with a perfect piece of elm. Since no timbers with knots should be used in aeroplane building, the tables at first sight appear to give true relative values for the various woods.

The natural fallacy which besets the engineer used to calculations in metals is the unconscious assumption that all perfect specimens of timber are monologous. This is by no means the case. A flawless piece of ash sawn from the outside of a tree will differ in specific gravity, tensile strength, elasticity, resilience, etc., from a piece of the same log sawn nearer the heart, and both will differ from timber riven instead of sawn. Timber sawn from young trees would differ in some respects from that obtained from older trees grown in the same locality. Timber only partially seasoned gives different values from timber "bone dry." Again, ash grown on a sandy soil differs from that grown on a clay or chalk soil; that grown in a coppice from that in an open field; that grown at a high altitude and bleak aspect from that in a lower and more genial position.

Tables of tests, therefore, are to be handled with caution, but the writer wishes most emphatically to say that it would be quite wrong to assume that the coefficients of strength set out in most tables in text-books are too high. In some cases the strength of certain timbers in proportion to their weight seems to have been calculated from poor specimens.

Tables would be more valuable and information could be more readily accumulated for future research if they were supplemented with full descriptive notes as to the place of origin, size of original log, when logs were felled, interval between felling and sawing, how long in stick after sawn, position of test pieces relatively to the heart. This information, of course, is only obtainable when timber is obtained from a first-class firm which purchases solid logs, and converts into planks, which are then seasoned in the open air before they are placed on the market. It is obtainable now. Such information was not sought for, nor was it readily obtainable, years ago, when tests were made from which tables in certain text-books were compiled.

In many kinds of hardwoods thick planks are never perfectly seasoned in the centre. If thick planks were used as material for tests, then if such planks were re-sawn into thin boards and allowed to season for a year, different ratios of strength to weight would be found on further tests. The differences would be greater in some woods than in others; thus they would be more marked in oak than in pine.

It may be said at once that no country in the world is better able than Britain to supply timber specially suitable for aeroplanes. In no land is the timber trade so well organized as it is here.

Two important points should steadily be borne in mind: (1) That timber is mainly a natural growth and therefore varies with all the many factors affecting growth, and (2) that time is an essential factor in proper seasoning.

Aeroplane builders must have the very best timber. If the ten best stocks are taken away from a pile of one hundred stocks, the whole grading may be upset; the pile which was formed for a certain class of trade may become of doubtful value for that trade and would have to be sold for some other purpose. It is more difficult for a first-class firm to dispose of "skimmed" stock than it is to sell fair average stock.

If, and when, the dimensions of the timber required in aeroplanes can be classified within reasonable range, special arrangements can be made whereby sizes in new and suitable woods can be prepared near the sites where the logs are felled, but no one can foresee that day.

The smaller the dimensions asked for, the greater the choice of timber for quality.

A well-known aeronautical firm telephoned an urgent order for ash, length 2A by width 2B. Out of a pile of 1,600 planks in the requisite thickness only four yielded the dimensions asked for. When the writer came in he was told of the order, and he saw at a glance that no aeroplane required planks of such a width and length combined. He therefore 'phoned up to the firm and insisted upon speaking to the works foreman, who actually would use the timber, and it was found that the largest finished size required was A by B. The idea of the clerk ordering the timber was to get planks of such a size as to cut up economically for two or three different sizes—a kind of least common multiple arrangement. Now, every plank (and there was 1,600 in the pile) would yield A by B, and therefore the practical choice for quality was 400 times greater than the apparent range as prescribed by the purchase in the first instance.

Silver Spruce.—This timber can be obtained in lengths from 10 to 32 feet, widths from 9 inches to 20 inches. The thicknesses of the imported planks are 3 in., 4 in., 5 in., and 6 in. It is an excellent wood for aeroplane construction, on account of the straightness of its grain, its lightness, and the long lengths obtainable. This timber is quite different from the Quebec spruce and from the European spruces.

Ash.—Square-edged ash imported from America runs from 8 to 16 feet long, and 6 inches to about 20 inches in width; the narrow planks are more suitable for aeroplane work. As the Yankees very often put their wood into the kiln to dry, it is preferable to use the log ash sawn in England and dried in the open air. The lengths obtainable run from 10 to 28 feet, but by far the greatest proportion are from 10 to 18 feet only.

It is much more difficult to obtain ash straight in the grain for a good length than it is to procure silver spruce absolutely straight. Further, there is a greater variation in the properties of ash than there is in those of silver spruce. When designers, therefore, have the option of specifying silver spruce or ash, and they can afford the extra bulk (with its attendant increase of head resistance) to bring the strength of spruce up to that of ash, it would seem prudent to prefer the former, especially as the ash is 75 per cent. heavier. But, of course, where resilience is of importance the latter should be used.

Hickory.—This wood is imported in logs which are sawn in England. The lengths run from 12 to 28 feet; the great majority of the logs are from 12 to 20 feet. Although the best hickory is stronger than the best ash, yet it is a wood which varies considerably, and it is doubtful whether, on the whole, in practice, weight for strength it has any advantage over ash. It is extremely tough, and is probably the best wood for skids. It should not be used in hydroplanes, as it is subject to rot in water. The heart wood in hickory is of a brown color, whereas the sap wood is white. This point is mentioned because, to an outsider, strips cut from the sap would appear quite a different wood from strips cut from the centre.

Kauri Pine.—This timber has been used by several people in aeroplane construction. Lengths can be obtained up to about 35 feet, and widths up to 24 to 30 inches can be supplied. Kauri pine has an attractive appearance and is easy to work. The writer, however, would not recommend Kauri pine at all for aeroplane work; it is extremely liable to warp, is heavier than silver spruce, and certainly inferior to it in its physical properties.

Elm.—Rock elm can be obtained in logs of long lengths, and is no doubt a very strong wood. One cannot recommend it for aeroplane construction, because it is usually sold in solid logs for the customer himself to saw and season; although this does not matter in shipbuilding work, where there is a constant demand for it, it is a drawback in an industry where design is not let settled and, therefore, stock cannot be put on one side to mature. Further, rock elm appears to have an advantage over ash in strength and other physical properties. Ordinary English elm is quite unsuitable.

Poplar.—The native poplar used in France is a very feeble wood. Yellow poplar imported into England from America runs from 8 to 16 feet long, 6 inches and up wide, in square-edged boards. It can be obtained in thicknesses ⅜ in. up to 4 in. This wood, although better than French poplar, is somewhat brittle.

Mahogany is used by two or three constructors. This can be supplied from 12 to 26 feet in length. The logs are usually sawn in England and seasoned in the open air. Thicknesses range from ⅜ up to 6 in. In working out designs it should be borne in mind that the actual thickness of mahogany is a saw-cut less than the nominal thickness. Weight for strength, mahogany is supposed to be a highly efficient wood, and it is also valuable in that it is not affected by water. If carefully chosen it should be a very good wood for aeroplane work. There are many varieties of mahogany in commerce and, therefore, selection should be made by a man with knowledge.

Yellow Cedar.—Yellow cedar is a timber which is imported

square-edged, 8 to 16 feet long, thickness from ½ in. to 3 in. It will not rot in water, and hence is highly suitable for hydroplane floats. It is a fairly cheap wood also, and therefore can compete favorably with mahogany.

Parang.—This is a species of mahogany which is much more fibrous than Honduras mahogany, about 75 per cent, stronger, and weighs about 3 lbs. per foot cube more than Honduras. It also bends well. Lengths 10 to 18 feet, widths 10 to 16 inches, thicknesses ½ in. up to 5 in. It has been used for dirigible propellers.

Oregon Pine.—This timber can be obtained in huge baulks; the writer has come across lengths 107 feet long. For most purposes at present it does not present any advantages over other woods, but may, of course, be useful later on when dimensions are altered, or conceivably it might be used in dirigibles. Silver spruce beats it in straightness of grain and lightness. Ash seems superior in strength.

Teak.—It may be as well to mention this timber. It is a highly suitable wood for work in hot climates. Teak is imported in logs and planks, lengths from 6 to 30 feet; usually running in planks 6 to 20 feet long, 4 to 20 inches wide. The weight of teak is from 45 to 55 lbs. per cubic foot. There are several varieties.

Walnut.—In aeroplane work walnut is used chiefly for propellers.

Black walnut is imported from America; lengths 8 to 16 feet—the great majority 8 to 10 feet—in square-edged planks; widths 6 to 18 inches. This wood is rather narrow, anything over 12 inches wide is costly. The thicknesses imported are from ½ inch up to 6 inches. Walnut is a faulty wood, and hence perfect specimens, such as are required for aeroplane work, are expensive.

French walnut (thick stuff) is imported in the natural shape of the tree. The lengths run from 6 to 12 feet, but only a small percentage go over 8 feet. Widths from 8 inches to about 20 inches. The planks are not squared, and the thicknesses are nominal; that is to say, a saw-cut has to be allowed for.

Satin Walnut.—Satin walnut has been used by one or two people for propellers, but the writer is surprised to find this, because it is a wood that warps horribly, whereby, of course, the propeller loses greatly in efficiency. Satin walnut is a wood that splits easily.

Oak.—It is a curious thing that oak, which for centuries has been one of the staple woods for shipbuilding, is not used in aerial navigation. The explanation, of course, is that other woods are stronger, weight for strength, and that there is a greater range of timbers available for commerce now than there was in the days of the wooden ship.

The peculiar virtues of oak—its durability, stiffness, and resistance to decay when buried in the earth—have little value for such aery, flexible, and transient structures as aeroplanes. If it were desired to preserve a few aeroplanes for a thousand years, then the Monarch of the Forest might condescend to provide chests for the Flinders Petrie of the thirtieth century to unearth. No lesser purpose will enrol the Royal Oak in the army struggling for supremacy in the air. Content with giving man secure victory over the raging deeps below, it leaves to lesser timbers the joys of bearing man aloft to wrestle with the winds.

Lumbermen's Sons at Vimy Ridge

Perry Robinson, war correspondent with the British headquarters in France, has paid a pretty tribute to the lumbermen's sons who fell at the great Canadian victory at Vimy Ridge. He says:

"On the summit of Vimy Ridge there is a little group of white-painted wooden crosses, marking the graves of the Seaforth Highlanders of Canada, who fell in the capture of the ridge. These Canadian Seaforths were mostly British Columbians. A long, long way they came to die, the long-limbed sons of Victoria, Vancouver, New Westminster, and Nanaimo. Some came even farther, for they came from the far-off slopes and peaks of the mountains of the upper waters of the Fraser River when they heard the call.

"There could be no prouder burial place than this ridge which they won so splendidly.

"One knowing the British Columbia of bygone days stops to look at these graves. It is the old British Columbia that leaps to mind, with its great reaches of unbroken forest. If one had his way he would plant this Vimy Ridge with trees brought from British Columbia, and let these men, when the present wooden crosses are replaced by a noble and permanent monument, rest under the shadow of a grove of their own pines, firs, and cedars."

No less than 200,000 tons of wood pulp are said to be stored at Swedish ports awaiting sale or shipment. Much of the pulp held in storage has been bought and paid for by British dealers, but cannot be delivered owing to the Swedish embargo on shipments of wood pulp to that country. American buyers have abandoned their efforts to purchase wood pulp in Sweden. The Swedish Government now requires a guarantee that Swedish pulp exported shall be used in the country to which it is first shipped.

Increased Pacific Coast Operating Costs

In the Canada Lumberman of July 1st an interesting article was published giving an analysis of the cost of producing lumber on the Pacific Coast. The figures given referred to Oregon mills. Further reference to the same subject is contained in the West Coast Lumberman of recent date, in an article dealing generally with the costs at Washington mills, and containing a striking summary of prices of supplies of many kinds, which are used by lumber manufacturers and loggers. The mill supplying the figures is located in Western Washington and gives reports for May, 1915 and 1917, which show that practically everything has advanced in price. The increases, reduced to a percentage basis, are as follows:—

	May, 1915	May, 1917	Increase Per Cent.
Labor	2.00	3.00	50
Belts	50-10% off list	40% off.	33 1/3
Shafting, 2 15/16	3.25 per 100	7.35	126
Wire Rope	60% off list	20% off	100
Files, 8 in.	.84 doz.	1.93	129
Brass Bushings	.35	.45	28½
Castings	.03½	.05	43
Red Oil	.16	.19	19
Black Oil	.07	.11½	64 1/3
Gasoline	.10	.18½	85
Powder	9.50	12.00	26 1/3
Saws (Head)	4.05 per ft.	7.70	90
Cross Cut Saws, 7½ in.	6.60	8.91	35
Emery Wheels	60% off	45% off	25
Lath Yarn	.08½	.21	147
Commissary Supplies			
Butter	.26½	.38	43½
Eggs	.18	.34	89
Beef	.11	.14½	32
Spuds	25.00	85.00	240
Beans	.05¼	.17¼	228
Bacon	.16	.35½	122
Ham	.16½	.27½	66 2/3
Flour	6.40	13.50	111

Referring to these figures the company say:—"You will note from the above that the increase runs all the way from 19 to 240 per cent. and that we have not picked out merely a few items that have increased in price, but have picked them at random and we think this is a representative list.

"You will note the item of labor has increased 50 per cent. In addition to this actual 50 per cent. increase we are paying in money, we find that our crew is about 25 per cent. less efficient than two years ago. It is impossible to keep a steady crew and we are constantly breaking in new men. These men are not only inefficient in themselves, but they reduce the general efficiency of the entire crew.

"As to the matter of supplies, a crew that is constantly changing will not take the same care in the use of supplies as will a steady crew of men who have been on the job a long time, hence there is considerable waste here, adding to the cost.

"As to the commissary supplies, the biggest increase in cost is here. It is necessary to provide better board now than ever before and we are unable to charge the loggers a sufficient increase to offset the rapidly rising cost of supplies."

Radical Change in Maritime Province Conditions

A despatch from Bangor, Me., published in the latest issue of the American Lumberman says:

"A radical change in business conditions since last fall is reported from the Canadian Maritime Provinces. Then business was brisk, the harbors crowded with shipping, and Halifax, St. John, and other centres swarmed with soldiers. Now the men in khaki are gone, the erstwhile busy ports all but deserted, and business is suffering a reaction.

"From April to December, last year, when the British and French deal trade was booming, all the New Brunswick and Nova Scotia lumber ports were packed with shipping, and prosperity was at high tide. Now the bottom has fallen out of that trade and the lumber movement has almost ceased, for although there is a brisk demand for spruce from the United States there are few vessels available, even at the unheard-of rates of $5.50 to $6.50 a thousand.

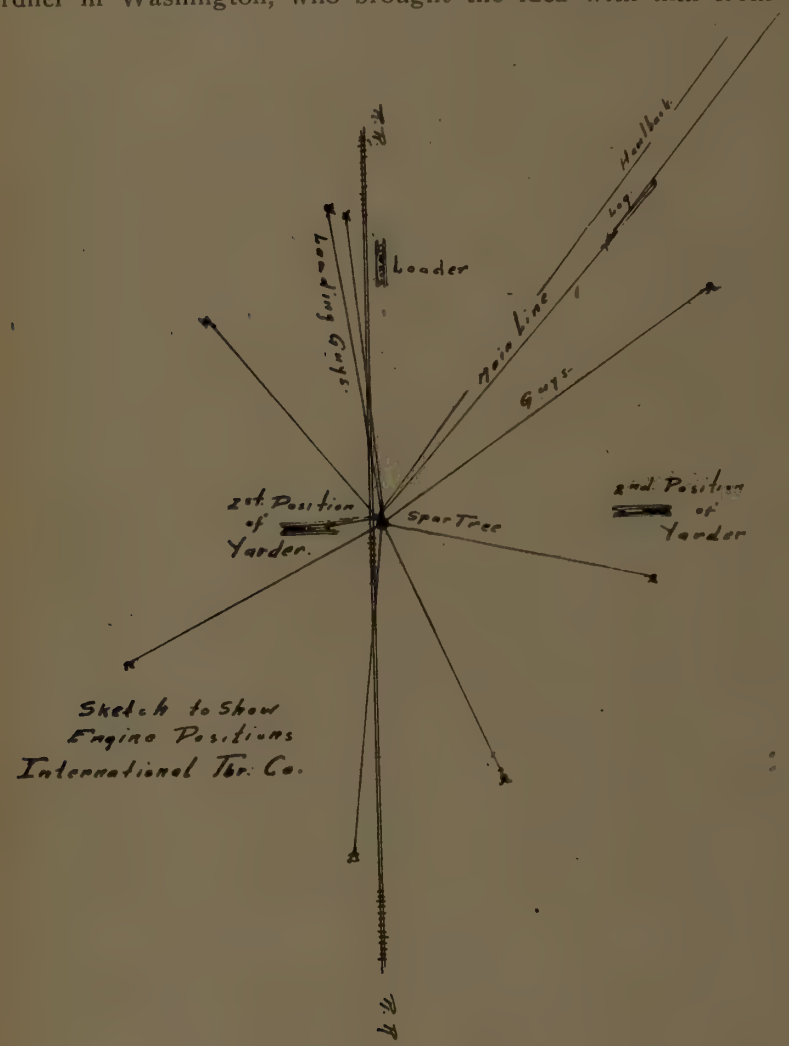
"Although shipyards are busy, construction has not kept pace with destruction. By early fall the provinces will have the beginning of a new fleet, but even in Nova Scotia, where they build them of native spruce and are not too fussy about the finish, vessels cannot be created overnight. Since the United States entered the war Uncle Sam is in high favor. The Canadians yell themselves hoarse at sight of the Stars and Stripes, and nothing is too good for an American."

High-Lead Logging Widely Used in B.C.

Western Camps Find Method Introduced in 1907 a Valuable Solution of Yarding and Loading Problems—Description of the System

During the past year or so a great deal of attention has been given by Coast loggers to high lead yarding. Although the "high lead" is an old system, having been used in the South for twenty odd years under the name of the semi-portable skidder, and now practically abandoned in favor of the "portable pine logger," and the various forms of cableway skidders, it never until the past couple of years has been used extensively on the Coast.

The first high lead on the Coast was used about 1907 by H. B. Gardner in Washington, who brought the idea with him from the



Sketch to Show Engine Positions
International Tbr. Co.

South. In British Columbia James McNaughton used the first high lead at the camp of the Canadian Western Lumber Company, Comox, in 1913. During the past two years the system has spread to nearly every camp in the province. Operators welcomed it as a means of getting away from the difficulties of ground yarding, with its rocks and stumps, and roots and mud, and heavy rigging; without the great expense and cumbersomeness of the cableway skidder. As the use of the high lead spread the system rapidly became improved in its details by the logger and the equipment manufacturer. Special high speed engines were produced, special loading engines to care for the increased yarding capacity, and specially efficient blocks and other rigging.

Until recently the yarding and loading has been carried on by the same machine, or by a yarder and a loader operating as one unit, or as two units operating at the same time. Not long ago, however, one of the large B. C. companies made what seems to be a further improvement in the complete separation of the yarding and the loading. As this has proven very satisfactory, we will describe at length the operations of the International Timber Company, where it is used in order that loggers on the Coast may judge of the suitability of the system to their own operations.

The International Timber Company operates on Vancouver Island, British Columbia, back of Campbell River. They own some thirty thousand acres, of which about twenty-five thousand acres are still uncut. The country is in general rolling, of a gravel formation, and of such nature that the logging spurs can generally be placed with regularity and within nine hundred feet of the stump. The timber is principally Douglas fir, averaging about 1,500 feet to the tree and 40,000 feet to the acre. By reason of the quality of the timber and market conditions it is logged in full length. The plan of logging is as follows: The branch roads are put in and the yarding settings laid out so as to secure forty acres at a setting. The equipment consists of five yarders, three being 10 in. x 11 in. Willamette compounds, one a 12 in. x 14 in. Willamette compound, and one an Empire 11 in. x 14 in. four drum high lead; but while having five yarders only four yarding crews are employed, the extra engine being rigged ahead by a rigging crew, so that no lost time occurs to a yarding crew when through with a setting. Four separate loading engines are employed, two being 10½ in. x 10¼ in. Washington compounds, and two Empire 10 in. x 11 in. duplex. Three loading crews only are employed, the extra loading engine being moved by a rigging crew, as with the yarders.

In operation the yarder has two locations at each spar tree, as per sketch. All the timber on one side of the track is yarded and decked at the spar tree (see pos. No. 1). The yarder is then moved across the track behind the pile and the timber on the other side of the track is yarded. High spar trees are desirable to permit a high rather than a large pile The pile being between the engine and the work, the engineer operates entirely on signal. As high as four million feet has been yarded to one pile. The "Toots-E" electric whistle is used. The setting being completed, the yarding crew moves to another yarder, and the rigging crew moves the yarder to another setting. The spar tree rigging (guys, blocks, etc.) is not disturbed but is left for the loader. A loader is now brought in by a rigging crew and placed in position ready for a loading crew when it completes its last pile. The loading is done by a system developed at this operation; it might be called a "duplex haul-back" system.

The merits of this loading system are that it permits long logs to be handled easily and quickly; and as many logs are necessarily left one hundred or two hundred feet from the track, a haulback is necessary. The system was worked out with the Washington compounds, having a crotch line on the main drum and a spreader, the haulback line being attached at the crotch. In loading, the log being brought into position over the car, it is lowered on the friction if a small log, and by "bleeding" the cylinders of a large log. This system of loading worked out so successfully that two special 10 in. x 11 in. Empire duplex loaders were installed. With this loader each loading line is controlled in either direction by its separate engine; while the lower engine carries the haul-back drum.

Each yarding crew consists of eight men; each loading crew of five men; the rigging crew of four men. Eight complete sets of rigging are necessitated by this system of rigging ahead. By separating the yarding and the loading, the output per man has been materially increased, the cost decreased, and a regularity of output assured, which, of course, affects favorably the costs of railroading and booming.

Logs yarded by high lead system. (International Timber Company, Ltd.)

An average output of three hundred thousand feet per day is now secured by this camp; which, considering the timber conditions, the thirteen miles of main line, the difficulty of booming, and the average number of men employed (only one hundred and seventy-five) speaks well for its efficiency.

E C. Rector, Vancouver, is general manager of the company.

Wood Preservation Shows Increase

Greater Quantity Treated in United States During 1916 than 1915—Construction Timber Shows a Decrease

In 1916 a total of 150,522,982 cubic feet of wood was treated by the 117 treating plants which were active during the year. This is 9,664,019 cubic feet, or 6.9 per cent. more than the 140,858,963 feet of material treated by the 102 plants which reported in 1915.

An increase of 383,783, or 2.5 per cent. was recorded in the number of cross-ties treated during 1916 over the number reported in 1915, while the quantity of piling treated was more by 3,382,448 linear feet, or 36.3 per cent. A gain of 852,171 square yards was also made in the quantity of paving material treated, while the number of cross-arms was greater in 1916 than in 1915 by 145,559, or 99.5 per cent. The largest increase occurred in the number of poles treated, which amounted to more than twice the number reported during the previous year. In only two of the seven classes of material covered by the report were decreases registered in the quantity treated. The items consist of construction timber and miscellaneous lumber and the amounts given fall short of the 1915 figures by 3,119,819 and 913,509 board feet respectively.

The quantity of preservatives used by the industry during 1916 in the treatment of the 150,522,982 cubic feet of wood reported amounted to 90,404,749 gallons of creosote and refined water-gas-tar, 26,746,577 pounds of zinc chloride, 5,675,095 gallons of paving oil and 582,754 gallons of miscellaneous preservatives. The amount of creosote and refined water-gas-tar used was greater in 1916 than in the year previous by 9,545,307 gallons, while a decrease of 6,523,027 pounds was recorded in the consumption of zinc chloride.

Preservation of Ties

Since the wood-preserving industry in the United States has been built very largely upon the treatment of railroad timber, principally ties, this class of material constitutes the bulk of the total quantity of wood treated. In 1916 there were reported a total of 150,522,982 cubic feet of material subjected to preservative treatment, of which 112,408,104 cubic feet, or over 75 per cent., were ties. The actual number of ties treated was 37,469,368.

The quantity of piles treated in 1916 amounted to 12,690,867 linear feet, or 3,382,448 linear feet more than are shown by the figures for the previous year.

It is probablbe that as many more poles are subjected to some kind of preservative treatment as are reported by the treating plants. Such treatment, however, consists practically altogether of dipping or painting (brush treatment). Since this report includes only those poles which were treated in cylinders or open-tank plants, it does not cover material of the kind first referred to. The number of poles treated in 1916 was 328,517, or 202,461 more than were reported in 1915.

Preservation of Paving Blocks

The quantity of paving material treated in 1916 shows an increase over the 1915 figures of 852,171 square yards. The total for the year was 3,788,541 square yards. The percentage of increase was greatest in the Pacific Coast region, where 414,884 square yards were treated during 1916 as compared with 66,552 in 1915. The Interior Eastern and Southern Coast regions also contributed to the increase with 317,572 and 334,095 square yards respectively. Where 1,000 square yards were reported by the Interior Western region in 1915, none was treated in that region this year.

Yellow pine blocks were first in importance, the quantity treated being nearly six times the total number of all other species combined. Douglas fir blocks ranked second with a total of 409,569 square yards treated, followed by 220,955 square yards for tamarack, 6,849 square yards of Norway pine, 6,098 square yards of western larch and 4,400 square yards of sugar maple.

Preservation of Construction Timber

The material included under this heading consists principally of bridge timber, switch-ties and other heavy structural material. The total amount of material of this class which was impregnated with preservatives in 1916 by the treating plants of this country was 138,889,222 board feet, a decrease from the quantity reported in 1915 of 3,119,819 board feet.

The largest quantity of cross-arms was treated by the plants of the Southern Coast region, the number reported being 197,103, or an increase of 75,158 over the number treated in 1915. A marked increase occurred in the number of cross-arms treated in the Pacific Coast region, where 64,267 were run through the cylinders in 1916, or more than 12 times the number reported in the year previous. The total number reported by all plants was 291,778.

The material included under this heading consists of mine props, tunnel sets, dowels, tie plugs, drain boxes, shingles, pipe staves, signboard lumber, fence posts, factory sub-flooring, conduits, trunking and capping, cattle guards, dead men, pole steps and miscellaneous lumber and planking. The total amount of this class of material reported was 13,024,000 board feet, or 913,509 board feet less than was treated in 1915.

Public Are Great Paper Wasters

The Dominion Conservation Commission has sent out a circular requesting manufacturers, retailers and consumers to save and conserve paper.

"All available sources of information report shortage in raw material for woodpulp," says the commission. "Recruiting for the forestry and other battalions has taken many woodsmen out of the country, and during the past season the cut of wood has been very much below the average. The demand for Canadian woodpulp is rapidly increasing. One of the more important factors is the cutting off from the United States of the supply from Norway and Sweden, owing to lack of shipping. The heavy sale of newspapers, with news of the war, has also greatly increased the demand for paper. The Canadian and United States Governments have enabled the newspapers to secure their supply of paper at a price which they can afford to pay. Without this action many of them would no doubt have been compelled to cease publication.

"Canadians are wasting an enormous amount of paper daily. Very small indeed is the supply available for reclamation compared with the amount distributed daily by the newspapers alone All of this paper, if saved, could be used again for other purposes, such as the making of building papers, boxboard, roofing felts, filling for pasteboards, etc., thus relieving the shortage of new materials.

"With the scarcity and increased cost of pulpwood the public should make every effort to assist. Much can be accomplished by saving waste paper, and various organizations have had good results. In one day eight schools in Winnipeg turned in 5½ tons of old paper to the Red Cross Society. This achievement can be repeated all over Canada. In many of the smaller places schools could combine their collections. Boy Scout or Girl Guide troops could collect and deliver to a headquarters, or collecting boxes could be placed at street corners, where the public could deposit parcels of old papers. Through the use of collecting boxes in Ottawa the Daughters of the Empire are securing 35 tons per month. All qualities of paper can be used; newspapers, books, magazines, manila or kraft wrapping, cartons, etc. Numerous organizations could with advantage undertake this work, looking after the gathering, packing and shipping of the material. A large revenue could be derived from this source, and valuable service thus rendered to Canada in relieving our forest resources of a heavy strain."

Head of U. S. Forest Service Now in France

Announcement of the arrival of Henry S. Graves, chief of the United States Forest Service, in Paris has led the Department of Agriculture to explain that Mr. Graves has gone abroad to make arrangements for the forest work which the American army engineers will undertake in France in connection with the military operations of the allied forces.

Because of the opportunity for service by this country in woods work incidental to the war which the request of the British Government for the sending of a forest regiment was believed to present, Mr. Graves has been granted leave of absence from his position as head of the Forest Service, and has received a commission as major in the Reserve Engineer Corps. He has not been assigned to any command, but is acting under instructions, it is stated, to proceed to France in order to learn on the ground in advance just what conditions will need to be met, what equipment will be called for, and how extensively the services of American lumbermen can be utilized to advantage. Meanwhile the recruiting of the regiment, which has already been asked for, is being pushed by the Forest Service, and is said to be advancing rapidly.

One of the staff officers of the regiment—Capt. Barrington Moore—is with Mr. Graves for the purpose of arranging for its prompt assumption of the specific duties to which it will be assigned when it is landed in France. While organized on military lines, the work of the regiment will be industrial, not combatant. It will operate in the woods, behind the armies, getting out timbers, ties, and lumber required for military purposes.

The Northern Pacific Railway has placed an embargo against all shipments of forest products which do not show final destination. The importance of this order will be most far reaching. The order was brought about in an effort to conserve the car supply. So many transit cars of lumber have left the coast in recent weeks, or, in other words, the privilege has been so badly abused not only by wholesalers but by mills that there are at the present moment very large accumulations of unsold cars of lumber at all the diverting points, thereby tieing up cars that ought to be in use at this critical period.

Lumber Consumption for War Purposes

An Outline of Quantities Required in United States—Industrial Preparedness of Manufacturers a Great Factor in Efficient War Organization

The consumption of lumber in Canada in connection with the war has been carried on in such a varied manner that it has not been possible to present anything in the form of a useful summary of the actual quantities used. Undoubtedly the amount is very large, and the ability of the country to furnish almost unlimited quantities of lumber suitable for all kinds of work has been a great factor in promoting the preparedness of the allied powers. In the United States quite a different situation prevails. Thoroughly organized associations of lumbermen are in existence there, and their officers and members have come to the aid of the country with their vast resources in the way of information about available stocks, prices, suitable varieties, freight rates, etc. It has thus been possible to gather valuable and interesting information about the quantities, grades, and varieties to be consumed, and an excellent summary of these is contained in an address by Mr. R. S. Kellogg, secretary-manager of the National Lumber Manufacturers' Association, recently delivered before the World's Salesmanship Congress at Detroit. Mr. Kellogg's address was, in part, as follows:

Backed by two thousand, eight hundred billion feet of standing timber, and an annual cut of some forty billion feet, there can be no question about the ability of the lumber industry to meet all demands upon it for the timber needed for the national defence. The industry has the raw material, the machinery for conversion, and large supplies of the finished product ready for service. There is at least eight or ten billion feet of lumber already manufactured at the sawmills, and perhaps as much more in the many retail yards and distributing centres throughout the country.

The government is planning for mobilization camps throughout the United States, to take care of the new army of one million men. Many of the buildings will be one-storey structure, of considerable length, although some of two storeys are also planned for. They will be of plain construction, but of modern type, with the most improved sanitary arrangements. They are expected to be the cleanest, best arranged, and most up-to-date barracks the world has yet seen provided for any army.

Army Cantonment Requirements

There will be many cantonments. Arrangements are being made to secure this in all parts of the country, using the kinds of timber most available in each locality. The committee on lumber of the advisory commission to the Council of National Defence has worked out specifications for the species and grades best adapted to each region—making these specifications interchangeable so as to permit either the purchase direct from the manufacturers or the use of accumulated yard stocks in the hands of distributors, as may be determined.

The estimate, based upon War Department plans, amounts to a total of 13,519,334 feet for the construction of a standard camp to care for an infantry division of 25,000 men. There are 61 items in the specifications, some of the larger quantities of which, for example, are 1,249,848 ft. of 2 x 4-8 ft. to 16 ft. SISIE for studs and girts; 318,790 ft. 2 x 6-10 ft. (8, 12, or 16 ft. accepted) SISIE for floor joists; 213,132 feet 2 x 6-14 ft. rough for sills (double); 1,050,562 feet 6 in., 8 in., 10 in. or 12 in. siding SIS 8 ft. to 20 ft.; 3,021,092 ft., 6 in. to 12 in. SIS random lengths for roofing and sub-floors, and 1,696,764 ft. 3 in. to 6 in. random length flooring. Each standard cantonment will also require 22,000 No. 2 stock sash of 6 or 9 lights and 6,000 No. 1 and 2 stock doors.

As an example of the way in which the specifications have been made interchangeable for different regions, the dimension stuff for studs and girts may consist of merchantable spruce framing in New England, No. 2 common hemlock in New York and Pennsylvania; North Carolina pine along the Atlantic Coast to Georgia; No. 2 common Southern yellow pine or cypress in the Gulf States; No. 2 common hemlock, Norway pine, or tamarack in the Lake States; No. 2 common fir or hemlock on the North Pacific Coast; No. 1 common Douglas fir or larch in the Inland Empire; No. 2 Douglas fir, Western hemlock or merchantable redwood in California, or sound and square edge yellow poplar or chestnut in the hardwood regions. In siding, the specifications permit No. 2 merchantable spruce boards in New England; No. 1 common hemlock in New York and Pennsylvania; No. 4 North Carolina pine along the South Atlantic Coast; No. 2 common Southern yellow pine or cypress in the Gulf States; No. 1 common hemlock, Norway pine or tamarack in the Lake States; No. 1 common fir or hemlock on the North Pacific Coast; No. 2 common Western or Idaho white pine, fir, larch, or spruce in the Inland Empire; No. 2 common Western white pine, or No. 1 common Douglas and white fir or merchantable redwood in California, sound and square edge yellow poplar and chestnut in the harwood regions.

In the detailed schedule for these materials the lumber committee made the following recommendations:

"1. That all cantonments built north of the 35th degree of latitude be double-floored and sheathed, in accordance with the alternative items listed, with a cheap grade of resin-sized building paper between lining and flooring, and between sheathing and outside finish respectively. This is regarded as essential to the health of the troops in winter and as an economy in reduction of heating costs.

"2. That, in any event, 4 or 6 in. D and M siding, laid vertical, be substituted as far as obtainable for the boards and battens called for by the specifications. This is in the interests of a lighter and neater surface finish.

"3. That in the same latitudes and for the same reasons triple-ply composition roofing, or a cheap grade of shingles (viz., 4 in. sound butts in the Lake States or standard A grade in the Pacific Northwest) be used for surface roofing.

"4. That for durability and service No. 3 hardwood strips be used for surface flooring wherever obtainable; also that hardwood thresholds be used at exterior doors.

"5. That ground posts, except cedar, redwood, or cypress, be given a brush coat of creosote.

"6. That a standard specification as to size and spacing of nails be incorporated in all contracts for the building of cantonments."

Several aviation camps are being established which will also require a good deal of lumber.

Wooden Ship Construction

The second biggest item of demand for lumber in connection with the national defence is for the construction of the much-talked-about fleet of wooden ships. A great many contradictory statements on this subject have been issued, but it is reasonably certain that at least 250 vessels of standard type will be constructed of wood, using an average of one and a half million feet of lumber each, or a total of a little less than four hundred million feet. In addition to these vessels, of course, every wooden shipbuilding yard in the country is working, and will continue to work, to the limit in the construction of all sizes and types of vessels for private owners. High prices for charters make this profitable even if a boat survives only a few voyages.

The specifications for timber for the standardized wooden ships to be built by the Emergency Fleet Corporation of the United States Shipping Board run into a long list of materials—157 items for the Atlantic type and 167 items for the Pacific type.

The total quantity of lumber required for each ship to be built on the Atlantic and Gulf Coast amounts to 1,435,933 feet, of which nearly all is of the grade of dense merchantable yellow pine. A small amount of square edge yellow pine will be used, and some 10,000 feet of select white oak for stern posts, rubbed stocks and similar purposes. The various types and sizes of knees may be of either live or white oak, spruce, tamarack, cypress, or white cedar.

Some of the larger sizes of timber required for the Atlantic type are pieces 16 x 20-50 ft. for stems; 14 x 16-18 ft. for keels; 14 x 14-48 ft. for keelsons; flitch timber frames up to 12 x 20-16 ft.; upper deck beams 12 x 18-26 ft. to 44 ft.; oak stern posts 14 x 24-40 ft. The planking runs from 24 to 40 feet in length, averaging 32 to 35 feet, and of dimensions from 3 x 4 to 6 x 19; decking is principally of 4 x 4 stuff, averaging 26 feet in length.

The specifications for the ships to be built on the Pacific Coast, using chiefly Douglas fir, are similar to those for the yellow pine boats, but the total quantity of timber required is 1,692,734 feet, and some of the sizes are larger. The grade is principally selected common. Instead of oak, the Pacific Coast ships will have stern- posts, rudder-posts, rudder-stocks, and keel-shoes of selected structural gum or ironbark—species of eucalyptus. Either western red cedar or Douglas fir may be used for knees.

There are, of course, many small items of wood used in shipbuilding that in total amount to a great deal. For example, each ship will require 20,000 trenails, and it takes about one board foot of lumber to make a trenail. A trenail is simply a heavy hardwood dowel used to hold the parts together. Trenails are 1¾ in. or 1¼ in. in diameter and 26 in. to 40 in. long. Black locust has been used for this purpose, but white oak is also specified, and it is likely that other hardwoods may be used. There will also be considerable interior finish for cabins not covered by specifications so far published.

The navy may use as much as two hundred million feet of lumber for training camp purposes, in much the same fashion as the army is building cantonments. There will be many other uses of lumber by

the navy, concerning which nothing may be said at this time. We know, for instance, that one concern, whose office is in New York, assembled in Canada 550 eight-feet submarine chasers within 535 days for England. This was one of the most remarkable examples of speedy construction we have had. A "master boat" was first built, every part of which was carefully fitted and measured as permanent models or templates. From each of these templates 550 exact duplicates were made in the parts of the country best suited to the production of different materials. They were shipped to the assembling plant in Canada, and at the finish the rate of the assemblage had reached the speed of three complete boats per day. The lumber was worked up at a mill in New Jersey, and a total of over eight and a half million feet went into the operation. Should our navy undertake the construction of similar boats the facilities are available and the neiessary experience already gained.

Y.M.C.A. Buildings

The War Work Council of the Y.M.C.A. has made definite plans for the erection of some 200 buildings at the army and navy training camps throughout the country. There is expected to be a complete unit of building equipment and secretaries for every 8,000 men in camps. The buildings are of standard type, approximately 40 ft. wide and 116 ft. long, with a wing 20 ft. x 27 ft. The walls are of 2 x 4 studding, covered externally with shiplap and internally with 3 in. matched ceiling. Each building will require approximately 37,000 feet of lumber, and as in the case of the cantonments, the most available species and grades at each point will be used. The building will contain an auditorium seating between 800 and 1,000 men for moving picture entertainments and religious and educational addresses. There will be large facilities for correspondence, both in the auditorium during the day and in the special auxiliary writing-room for use when the auditorium is occupeid. Four class-rooms are being provided for the educational work which will be carried on in most of the camps, and for use of religious groups as well. For the men who wish to be alone for study or conferences with leaders, five small studies have been included in the equipment. In addition to the business office and administration centre, five bedrooms for the staff and a moving picture booth will be provided.

One of the large items of lumber consumption will be for packing boxes and crates for both the army and navy. No one can say at this time just how much lumber will be used for boxes, but it will probably amount to a total of several hundred million feet. Specifications for boxes are being worked out by the government bureaus, in co-operation with the National Association of Box Manufacturers.

Army transportation requires innumerable wagons. Recent orders are in excess of 30,000 such vehicles, all of which will be built according to specifications. The orders for these wagons have been distributed by mutual arrangement among the wagon manufacturers, and they will probably require at least twenty-five million feet of high-grade yellow pine and oak.

Soldiers must have guns to fight with and cots to sleep on.

It is said that a gunstock requires about 10 feet of lumber, so if we should make a million new rifles in this country, it will take ten million feet of lumber. If a new army of one million men is fully equipped it may require four or five million rifles. Walnut has always been the preferred material for gunstocks, but birch has also been used for contracts for the Allies, and it is possible that the birch and gum may be used in this country.

An army cot also takes about 10 feet of lumber. Recent orders by the War Department, placed in Wisconsin, are said to have exceeded 400,000 cots, which would require more than four million feet of rock elm, beech, or hard maple, chiefly 1½ in. thick.

The larger tents must have poles. A recent order for 20,000 such poles requires over 200,000 feet of lumber, which in this case is Douglas fir of 3 x 3-14 ft. stuff.

If the United States should decide to carry the war into the air it must build thousands and tens of thousands of airplanes. It is said that the Allies have 20,000 airplanes on the western front, and the wastage in very great. Light, strong material is especially necessary for airplane construction. Ash has been chiefly used in the bent portions, spruce for the wings, and for the propellers a variety of different woods, built up in laminated fashion, so as to have the necessary strength and to prevent checking and warping under the severe conditions of service. To build 10,000 airplanes may require the equivalent of twenty million feet of rough lumber.

Other war uses of lumber include the material for automobiles, artillery, cooperage, furniture, ways, docks, trench lining, saddles, mine timbers, tools, railroad construction, etc., etc. There will also be a large amount of lumber used in construction of new factories to fill war orders.

Rounding up all the different items, the best estimate that can be made is that the amount of lumber required for purposes of national defence within the next twelve months may total between one and a half and two billion feet. This sounds like a big figure, and is a big figure, yet it will not exceed 5 per cent. of one year's lumber production of this country. There is no reason, therefore, for any fear on the part of any other lumber user that the war demands will make it impossible for him to get the kinds and sizes of lumber needed for his particular purposes. We have the producing capacity and the forest resources; the only difficulty, if any there may be, is that of transportation. Car shortages are something that it seems difficult to prevent in times of emergency, but we believe that transportation conditions will finally be adjusted so as to permit the carrying on of normal industrial operations with the least possible delay.

The present crisis has demonstrated. as never before, the value to the country of business organizations. Without them it would have been wholly impossible to make the progress that has been made in the short time since war was declared in changing a totally unprepared nation into a nation that is swiftly arming itself for the greatest conflict of the ages.

The Associations of Lumber Manufacturers have had committeemen with power to act in close consultation with the government departments for the last two months. Practical specifications and reasonable prices for the materials required have been worked out and agreed upon, and arrangements made to give government orders the right of way. Competent authorities estimate that this has resulted in the saving of millions of dollars to the government and contributed greatly to the national defence. From the start there has been a prompt and hearty co-operation throughout the industry with all the government departments, bureaus, and commissions. The biggest men in the industry are giving without limit of their time and energy to the practical solution of the many problems connected with the mobilization of the national resources.

When the fight for world democracy is won no little share of the credit of the victory may be justly allotted to the lumber industry of America.

Western Canada's Wood Resources

James White, assistant chairman of the Canadian Conservation Commission, recently paid a visit to Victoria, B.C., and, after a tour of the Pacific Coast province, stated that he believed the pulp wood resources were in the neighborhood of 250,000,000 cords. He said that the situation was, however, serious throughout Canada, especially in the far east, where the extent of the pulp wood had been grossly overestimated. Cruisers in Eastern Canada and the United States had, in some cases, reported that there was enough material to last fifty years. Later investigation had proved that about thirteen or fourteen years would be nearer the limit. Mr. White said that the result was that America must now look to the west for its supply of pulp wood. With the east facing exhaustion, British Columbia's pulp making woods were destined to meet a large part of continental requirements. Soon Canada would be the world's greatest source of pulp and paper. If regulated, the forests of British Columbia could continue to give six million cords of pulpwood per annum for an almost indefinite period.

Many New Houses Required in Great Britain

The necessity for the construction of a great number of houses for the working classes in Great Britain was made the subject recently of an important interview by a deputation which called upon Lord Rhondda, President of the British Local Government Board. One of the deputation stated that approximately £30,000,000 a year was required to provide for the normal growth of the population in England and Wales alone. Mr. Russell Taylor, of Liverpool, stated that 500,000 houses would be required after the war in urban and rural districts. Lord Rhondda replied to the deputation, saying that the matter was very urgent, and it was important that the Board should be prepared so that after the war they would be able to put their schemes into operation at once. There was a widespread impression that the State would have to provide something in the way of aid for the erection of houses that would be undoubtedly necessary. His own mind, however, was not yet made up regarding the working out of the Government's part in the scheme, and he could not make any definite statement as yet.

Wants to Fine Merchants for Holding Cars

Mayor Church recently addressed a number of C.P.R. officials at a conference in Toronto in connection with the coal problem. He expressed the opinion that it was largely a matter of transportation, and "that the retail dealers and wholesalers who do not unload their cars promptly are to blame. The railways could get rid of them in a day, instead of five days, as now." Mayor Church added that he was urging Sir Henry Drayton, chairman of the Dominion Board of Railway Commissioners, to lay down rules and fines for holding cars.

Relation of the Lumber Manufacturer to the Retail Dealer

By W. D. Humiston*

It has been so frequently said that the average lumberman is the poorest merchant in the world that it is not surprising that we ourselves have begun to believe it.

As between the manufacturing lumberman and the retail lumberman the odds have generally been conceded to be against the manufacturer.

While this very uncomplimentary statement may have been true of the average lumberman a couple of years ago, there have always been some outstanding exception to such a broad generalization in the ranks of both the manufacturers and the retailers, and very recently the great majority of all lumbermen have come to see things in a new light, and have been inspired with a determination to adopt better methods, become better business men, and to co-operate more closely with each other.

The lumber business is not only one of the oldest in the world, but one of the oldest and most important in North America. It is 294 years since the first sawmill began operations on this continent.

During nearly three centuries logging and manufacturing methods, machinery, and equipment have kept pace with the development in other business. But in technical lines, up-to-date business methods, proper cost accounting and salesmanship the lumberman has fallen far behind those engaged in other fields of endeavor and has been almost blind to his opportunities. The result is that, while the country has been growing and building up rapidly, the per capita consumption of lumber has fallen off greatly during recent years, and the up-to-date manufacturer of substitutes have had an easy time in taking a large share of a business which was once all our own and which could have been largely reserved to us if we had only taken proper care of it.

During tht 277 years from the installation of the first sawmill at York, Maine, to the year 1900, stumpage was accessible and comparatively low in price; labor was reliable and cheap; most of the logs were driven down large streams at small cost; and the sawmills were located close to the territory in which the lumber was used, making the cost of transporting the finished product from the mill to the dealer low. The country was growing rapidly and the demand for lumber was large and steady. There was no substitute competition. Under such circumstances the lumbermen prospered.

It was the rule for buyers to go to the mill, and frequently they would take the entire mill-run output of a group of mills at prices which were profitable to both parties to the transaction.

While this way of marketing his product was very easy for the manufacturer, it was not particularly conducive to the development of salesmanship or good merchandising methods. The real salesmen and merchants naturally drifted into the wholesale and retail end of the business.

While the manufacturers were helplessly drifting around in a rudderless boat on the sea of modern business, without charts, compass, or a knowledge of navigation, the substitute manufacturers were launching their campaign, built on sound economic and business lines, and backed by the best advertising talent money could employ.

The result was inevitable.

With an installed sawmill capacity of three times the market requirements; with poor financing, low average efficiency in manufacturing, and without even a rudimentary knowledge of merchandising and salesmanship, the manufacturing lumberman was not able to meet substitute competition, high wages, low efficiency of labor, increasing taxes, and high costs of the supplies he used.

A few years of these conditions brought bankruptcy to some manufacturers, strained the credit of many, and reduced the bank balances of all. The climax seems to have been reached in 1914 and 1915.

Brought face to face with ruinous conditions and realizing that something must be done if the industry were to continue, the far-sighted men in the business began to investigate and gather data as a basis on which to predicate definite plans for the rehabilitation of the business on a profitable basis.

Some of the first definite conclusions reached were:

That "the manufacturer has always left the retailer to develop his own market and in late years to become the agent of the more aggressive manufacturers of substitute material."

That "definite co-operation between manufacturer and retailer is hindered by lack of knowledge of each other's needs and aims"; and

That "the manufacturers have not spent enough money on general publicity to make the consumer come to the dealer and demand wood."

While no one acquainted with the facts can dispute this analysis of the mistakes and weaknesses of the manufacturers. I want to come to their defence long enough to say that, with the almost ruinous conditions obtaining in their part of the lumber business for the past few years, very few manufacturers have been able to do their share towards financing large advertising campaigns, and those who had the ability were timid about spending money in undertaking things with which they were more or less unfamiliar by reason of lack of experience and training.

But "mistake is the discipline through which we advance," and now we must "make a virtue of necessity" and bring things about so as to do our share in helping the retailer market our product.

"Dealers handle a manufacturer's product because of inducement of price, good service, special selling plans, or similar specific advantages that the manufacturer can offer. The dealer naturally buys the lines that he can sell most readily. His quickest profits come from the goods for which there is the greatest demand. He gives preference, therefore, to merchandise for which the market has been created. The manufacturer who assists the dealer to create the market paves the way for future orders."

We, the manufacturers, must bear these business laws in mind in making our plans for the future. Co-operation between substitute manufacturers and dealers pays both parties, and I believe that co-operation between the lumber manufacturer and retailer will be found to pay even better.

Just here I want to say that, unless the retailer is alert, quick to take the initiative and willing to improve his business methods, too, the manufacturer's assistance and co-operation will be of little avail in increasing his business.

One can't sit in his office and wait for business to come to him these days, nor can he handle what business that comes to him in a careless, indifferent manner.

Selling goods is the biggest problem in the business world, and the selling of lumber will repay your best thought and unremitting effort.

Mail order competitors can only succeed in marketing their lumber in your locality by being more alert and aggressive, using more result-getting methods, and by using more printer's ink. They are wonderfully clever advertisers, and they seem to be making enough out of their business to pay for a great deal of space. They use their space well, too. Who ever saw a mail order house advertisement reading:

JOHN JONES
READY CUT HOUSES
Let me figure on your next house.
I can save you money.

There never would have been a bill of lumber sold by a mail order house if they did that kind of advertising.

It is a universally accepted business truth that the retailer in any line of business is the most important factor in the distribution of goods to the ultimate consumer.

This is peculiarly true of the retail lumber dealer, because he is selling a commodity regarding which his customer knows little or nothing, and for this reason he frequently occupies the dual role of merchant and expert advisor. Could anyone conceive of a stronger position for a salesman to be in?

The timber land owner, the logger, the manufacturer, the railroads, wholesalers, and his own community are all interested in and largely, if not wholly, dependent on the success of the retailer.

He has opportunities in successful merchandising and salesmanship that few men in other business enjoy, and he has especially attractive inducements to use originality and aggressiveness.

In many ways he has a big advantage over the manufacturer, particularly in that his own personality enters so largely into his transaction. Let me make this point clear.

Production by factory methods is merely repetition. Production methods may be completely standardized.

But no two sales are exactly alike. Selling methods must allow for the human element. Selling is individual.

Lumber may be produced at a mill at the rate of 50,000 feet an hour and the production kept up indefinitely, but each bill of lumber sold represents an individual transaction.

Now, let us see what the manufacturer should do in the interests of increasing the demand for lumber and in order to promote closer co-operation between himself and the dealer.

The manufacturer who is satisfied when he makes a sale to a dealer is not getting the most out of his field. By intensive cultivation his sales can be multiplied many times, for re-orders will not come in until the merchant disposes of his stock.

The manufacturer should establish a reputation for the quality of his product, and thus secure the good-will of both the dealer and the consumer.

When railroads first began to operate, each road had its own particular gauge of track, and could not exchange cars with other lines,

*Assistant general manager Potlach Lumber Company, in an address before the Western Retail Lumbermen's Association.

I think it is just as essential that mills standardize their grades and sizes as the railroads found it to be to standardize their tracks. The dealer should get identically the same grades and sizes from different mills any time and all the time.

I believe that trade-marking lumber will be found as advantageous to all concerned as trade-marking any other commodity.

"A trade mark establishes identity and responsibility, and partakes of the commercial signature of its exploiter."

The trade mark has become one of the elements of almost every successful business appeal to the consumer. It is going to be generally adopted by the larger mills or by the manufacturers' associations in the near future.

There are as sound business reasons why the "Potlatch Indian" should spell "Potlatch Quality Lumber" to both the retailer and the consumer as that you now have a vivid concept of both the commodity and its quality when I mention "Old Dutch Cleanser," "Rubberset" brushes, "Uneeda Biscuit," "Royal Baking Powder," "B. V. D." underwear, "Old Crow" whiskey, "Fatima" cigarettes, and "Ivory Soap."

The suggestive trade mark plus goods of permanent quality become builders of good-will, and this applies to lumber as truly as to any other article of commerce.

Trade marked lumber is surely coming.

I believe the manufacturer can and should so instruct and utilize his salesmen that they will become potent factors in trade extension work of affiliated manufacturers' associations.

Since the lumber manufacturer has awakened to his opportunities and his obligations the National Lumber Manufacturers' Association has been getting somewhat better financial and moral support than heretofore, though this support has been by no means adequate to its needs in carrying out carefully-laid plans for re-establishing lumber in its rightful field. It needs and should have a much larger fund with which to carry on its work in the interest of wood generally, and these funds should be furnished by the manufacturer of the country.

In spite of most discouraging handicaps, chief of which is the lack of sufficient funds, the National Asociation has been doing splendid work for both the manufacturers and the retailers.

Representing, as it does, all kinds of lumber, and covering the entire country, it can watch developments and plans of substitute manufacturers; it studies the viewpoint of the consumer; it is in a strong position to counteract the prejudice against wood which is so actively encouraged and fostered by substitute manufacturers; it can promote the use of wood, as such, without reference to species; and it can educate the consuming public in the proper use of lumber.

The National Association has been doing this work for some time, being only limited by its resources. It now lends dealers' assistance in furnishing newspaper advertising copy, cuts, and suggestions; it supplies trade-building literature, covering a wide range of subjects; it employs specialists, technical men, and engineers, and has facts and information not usually available for any local organization or individual. All this is gratis to the dealer who will avail himself of the facilities offered. Incidentally this association has carried on a splendid, country-wide campaign of advertising in the interest of wood generally without reference to any particular species.

Its trade extension department has been efficiently and economically managed, and has produced most astonishing results, considering its limited funds.

While these activities are excellent as far as they go, and constitute a long step in the right direction, the president and officers of the National Association do not feel that the proper work of the organization has been more than begun. If given adequate support by the manufacturer—and they will be I am sure—they want to widen their advertising compaigns; send out representatives to local meetings of all sorts to arouse interest in wood, investigating local needs and conditions at the same time. They suggest the formation of a good central service department, for the use of dealers, where correct technical information could be procured; reference books and samples of various commercial woods kept and from which moving picture films and models of buildings, etc., could be obtained.

Supplementing the work of the National Association, the various local manufacturers' associations can carry on certain work along the same lines where there will be no unnecessary duplication of effort or expense. These local associations can carry on advertising and general publicity campaigns, supporting the campaigns of the National Association, but these should be regional in scope and limited to those woods which their members produce.

These plans are not impossible or even unlikely to be carried out. As I have said, some of them have been tried, and others surely will be, for the manufacturer has at last realized his opportunity and his obligation to assist and co-operate with the dealer in the marketing of a product in which both are equally interested.

The manufacturers of the country generally are entirely convinced of the sound business sense back of the plan, and are ready and willing to pay the bills.

But these plans and expenditures of the manufacturers entail a moral and a business obligation on the part of the retailers to do their share to the common end.

You should eliminate cut-throat methods of competition, and work harmoniously together in strong local dealers' associations.

There are dozens of effective ways in which you can advertise other than in the local paper. Try the use of slides, to be flashed on the screen at the local "movie." Put up sign-boards; distribute novelties and circulars; keep a mailing list of live prospects and circularize this list at frequent intervals with good, business-pulling letters; keep a working model or two of houses and farm buildings and change them occasionally. They are cheap, and will be gladly furnished at cost by the National Lumber Manufacturers' Association.

Slick up the office and make it bright, clean, and attractive. Keep display racks on the walls well filled with literature that will be helpful and interesting to your customers. Have a rock of samples of different woods, moldings, etc., to which you ran refer Mr. Buyer. These are inexpensive and attractively gotten up by the National Association, and are sold to dealers at actual cost.

Try the elimination of all mystery and difficult figuring for your customer by naming a unit price for your lumber, etc., and by marking this price in plain figures on your bins.

Get after your representatives, village trustees, councilmen, mayor and county commissioners, and see what you can do toward repealing or heading off misguided legislation and discrimination against wood construction and shingle roofs.

See that your local architects, contractors, and builders have authoritative information about the best woods to use for all purposes, and be perfectly frank in telling them where not to use wood.

See if you can't persuade the school trustees in your neighborhood to get into line by building teacher's cottages near their schools.

Get next to the teachers and boys in the manual training departments of your schools, and see to it that they have good lumber, suited to their needs, with which to work, thereby making friends among those who will be users of it in a few years.

"Suggest that you can help the buyer and you have his attention. Tell how and you have his interest. Prove it and you are more than likely to get his order."

What we can do for the consumer is the most important question in retailing. When we have answered this question our own problems will be satisfactorily solved, and we shall have created the demand we now lack.

One of the greatest authorities on salesmanship says:

"The successful merchant of the future must approach his sales from the customer's side. It is not enough to collect to-day's profits, for your competitor is collecting to-morrow's good-will."

"Success in selling doesn't simply mean goods sold. It means customers satisfied. Tact, courtesy, open-minded fairness disarm antagonism, melt opposition, bring back business."

Be fair. Aim to sell satisfaction and your lumber will sell itself, with the aids and co-operation which from now on will be given you by the manufacturers through the national and our local associations.

We realize that the dealer does not care for lumber in his bins and piles—he wants trade. The bigger the demand for his lumber the greater are his profits—and proportionately greater are his purchases from us. Hence it is to the manufacturer's interest not only to sell his product to you, but to deliver the demand for those producers as well.

[While much of the above address refers to conditions in the United States, where the National Association operates, everything it contains has a distinct application also to conditions in Canada.]

United States Will Build Great Number of Airships

The United States Secretary of War has transmitted to Congress the drafts of two bills providing for a huge flying corps. The legislation provides for 22,625 aeroplanes and full equipment of machine guns, bombs, etc. The cost of the machines is estimated at $363,140,000. One item provides $31,000,000 for training stations. No decision has yet been reached by the Air Craft Production Board as to the purchase of lumber for the building program. The forest products laboratory at Madison, Wis., is conducting experiments with the kiln-drying of Pacific Coast spruce for aeroplane frames. The spruce lumbermen of the Pacific Coast will be thoroughly mobilized, in order that an adequate supply of lumber for the frames may be assured at all times, both to the United States and to the Allies.

Shingles sufficient to cover two small panels were recently fireproofed by the United States Forest Products Laboratory and sent to Seattle for fire tests to be conducted by the West Coast Lumbermen's Association. Shingles for one panel were painted with two coats of zinc borate paint, and the other shingles were given a zinc borate injection. Samples of these shingles tested in the inflammability apparatus at the laboratory indicate that the treatment and coating are effective.

Locating Unnecessary Expenses

By A. M. Brewer

Every dollar that a company saves on its cost of maintenance or production represents interest for one year at six per cent. on a capital of $16.66. Figured on this basis, it is obvious that any economy that eliminates a needless expenditure may have a direct and important bearing upon the value of a business. A saving of even $1 a day upon some apparently trifling detail may affect the theoretical value of the stock of a corporation over $6,000—a sum that is not to be lightly regarded by even a large concern. And the saving of $1 a day is possible in factories of very moderate proportions indeed.

The methods by which these elusive "unnecessary" expenses may be located and stopped must, as a rule, be devised by those who are intimately familiar with the detail work where the economies are to be effected, and who are in a position to suggest ways for accomplishing the necessary work by shorter or more effective routes. It is seldom possible for an executive head to point out the specific methods by which these detailed expenses may be reduced, unless he is thoroughly versed in the routine of the department, however competent he may be to analyze the work of the department as a whole and establish a standard of expense with which it must operate.

An illustration of these principles is furnished by a large manufacturing concern which suffered a period of bad business. The general manager instructed each department head, in turn, how to reduce expenses. To the sales manager, for example, he said, "Let out Brown and Smith." To the chief clerk he issued the order, "Combine this department with that, and do away with such and such a facility." All through the establishment the specific orders of the general manager were carried out.

Afterward, when things went wrong, the department heads shifted the responsibility upon their superior. "If Brown and Smith had not been fired," they said, "this would not have happened. If the 'G. M.' hadn't robbed us of this or that, the business wouldn't be crippled to-day." In other words, the responsibility was put up squarely to the general manager.

When the next period of hard times struck the company, the general manager simply told the responsible heads of departments to cut expenses 5, 10 or 20 per cent., as the case might be, without materially interfering with the facilities of the organization. Each sub-manager was thus thrown upon his own ingenuity and was held responsible. The result was a big crop of initiative in expense-saving ideas. Good men were retained who otherwise might have been sacrificed, and the efficiency of the plant was increased, leaks stopped and new methods invoked.

Responsibility is the mother of invention. If a manager is directed to attain a given result, and told that he must find the way to do it, he will accomplish more than if he merely follows instructions and moves along a prescribed course. That is, he will, provided he is the man for the job; this is one way to find out.

Almost always there is a way to cut expenses along some line that has escaped attention. For example, a furniture factory had lost $8,000 to $14,000 a year for seven years. The owners, believing the loss lay partly in power, installed new boilers, and then better machinery. Wages were cut and every outgo trimmed, still the factory ran behind.

In despair, the owners hired a successful manager at $10,000 a year, on condition that he make the plant pay. After a month spent in analyzing the situation, he concluded that the big expense lay in labor, much of which went to waste. Many piece-workers had been earning only $1.25 a day, or less. The new manager fixed the reasonable minimum at $2.50. He did this to increase the efficiency of labor at least 100 per cent., in order to establish an equilibrium between machine capacity and overhead expense on one side, and labor on the other. To accomplish this he established a bonus system, and discharged all workmen who did not prove capable of responding to the increased demands. More than half of the workers were too old or too antagonistic, and new blood had to be instilled. For a time there was bitterness in the town toward the new manager, but there was no alternative except to close down the plant and throw all of the employees out of work, and the men held their peace.

Another waste that he corrected was traced to incompetent cutting, which caused a heavy loss in raw material. Added to this, and closely allied to the labor waste, was a big loss of goods that were spoiled in machining. A whole building was found to be filled with this accumulated stock; most of it was charged off and used for fuel.

In the paint shop the manager discovered by tests that some of the men dripped a quart of varnish a day apiece. No comparative records had been kept to reveal this loss.

Failure to utilize waste material by turning it into by-products also made a considerable item. The second year after the change in managers the plant earned $14,000 net; the fifth year showed a profit of $75,000.

A big lumber concern found that it had been losing thousands of dollars a year through a waste of odds and ends. When an order for special sizes of lumber was filled, the sawed-off ends were discarded and either burned or carted away by the employees. The superintendent discovered this waste and directed that all the odds and ends were to be stored away in special compartments, with the sizes marked on them. Within a few months a big assortment of short sizes, some running as low as 2 feet in length, were held in stock. It was a surprise to the superintendent himself to find how many small orders could be filled from these short pieces. Within a year he made an inventory list of short pieces and offered them for sale at a discount. Carpenters and small dealers snapped these up quickly, for in a shop short pieces for odd jobs are always in demand. The stopping of that little leak saved over $3,000 for the company in one year.—The Woodworker, Indianapolis.

Reducing the High Cost of Sawmill Repairs

One of the unavoidable expenses of sawmilling is found in the replenishment of broken machinery parts, and at a time like the present, when everything except unsolicited advice is soaring in value, it behooves every mill man to assure himself that supplies are being handled and used with the minimum of wastage. The dark corners, closets, and basement cubby-holes in and about a sawmill plant are money-wasters, for the reason that they are the natural hiding-places of slightly-used parts, which may be needed badly at some urgent moment, but cannot be found until they turn up during some sporadic house-cleaning effort. Anyone who has inspected even the most efficiently-conducted sawmill can recall accumulations of cast-off metal parts filling odd corners and bulking large under-buildings of one kind and another.

As a matter of strict fact, much of this material is useless except to the junk man, but part of it can be used in emergencies to patch broken machines or by attention in the machine shop can be worked into smaller parts. But when everything is scattered about the plant and hidden by scraps the chances of redemption for the usable part are negligible. Railroads have realized the need of methods by which such cast-off material may be kept in view, and certain sawmill men have come to the adoption of such a system, which is the reason for this sketch. Perhaps the idea will appeal to others.

At the mill in question there is a clearing house for used parts. It stands in close proximity to the supply house, the machine shops, car shops and foundry, and is under the eye of the sawmill foreman as well as under lock and key. Under the arrangement of this mill all new material is put into stock by the supply man and charged to him by the general office. Then as the various foremen or millwrights present requisitions for repair parts he charges whatever they receive to the departments affected and closes his records so far as those items are concerned. But the used parts which have been removed in favor of the new are not returned to the supply house, nor thrown indiscriminately into a corner. They are placed in the "reclaiming house," which is the dignified title of this new institution. If they are unfit for further use they go to the junk bins, of which there are four, and are stored according to their value.

In the reclaiming house there are various divisions devoted to the numerous departments. For example, there is the sawmill side, where all sawmill cast-offs are placed, such as flanges, couplings, pulleys, pieces of shafting, and the innumerable other items that go into the mill proper. Then there is the proper allotment of space to each of the other operting departments, even to the railroad bins, where driving-boxes, brake shoes, rods, engine line shafts, pipe fittings, and whatnot may be found by the repair men when needed. In the centre of the room is a large cabinet, where bolts, nuts, and screws of all sizes are stored as fast as they are reclaimed from disintegrating and discarded parts. In short, this is a second-hand shop for everything that can be used at some future time.

The Saving System in Use

Just how important this matter of finding the desired piece of used material in an emergency may be is shown by an experience at this mill before the system was installed. One night the log-loader was brought in for quick repairs, needing a strong reinforcement over a broken casting. The master mechanic saw at a glance that he needed a piece of angle iron and remembered having noticed just such a piece somewhere about the plant. For two hours he and his helpers hunted through the junk piles, but finally gave up the search, and worked half the night fashioning the required bar of angle iron. Then two or three days later the bar was found beneath a pile of timbers in the car shop. The loading department was charged with the labor of these high-priced mechanics, when that bit of iron would have cut out two-thirds of the expense—if it could have been found. In the same way each department head is mighty glad to search through the well-arranged stocks in the reclaiming house if he can save for his department the cost of a new part by using an old one. Then, too, mechanics can devote their spare hours to reworking and assembling used parts into more elaborate and costly pieces of equipment. For example, the men

at this plant have salvaged two or three of the castings which form the journals on locomotives, and by skillful patching and welding have saved for their employers $30 or more on every item.

An oxy-acetylene welding outfit is a valuable accessory to such a reclaiming system, as it can be used to salvage material that appears to be beyond help. Locomotive frames and badly broken castings of many kinds have been made whole again with it. They have a vice in the engine room which was broken into three pieces and then welded together with this remarkable contrivance.

Brass is an item which is highly prized in sawmill repairing, and the custom in the lumber regions is for each master mechanic to save such scraps of brass as he finds until a moulder happens along to work it into slugs for future reference. Theoretically this is a fine way of handling the matter, but actually a good deal of the brass is misplaced between visits, so that there must be a general search made whenever the moulder appears. In the reclaiming house this company has a brass bin with two compartments, one for scraps picked up here and yonder and the other for filings which are saved by placing a cloth under the lathe whenever brass is being worked. These borings and filings now are worth about 15 cents a pound.

Scrap iron is divided roughly into four classes—first-class castings, seconds, railroad iron, and wrought iron. The junk values differ widely at present, as the above classification suggests. Railroad iron now is at a premium, while certain grade castings bring much more than inferior material. A junk buyer inspects a pile and bases his offer on the poorest stuff he finds therein, which is only natural, as he has to asume the burden of grading the lot. Therefore, whenever a company can sort its junk so that the buyer knows just what he is to find the chances are good for considerable gains in prices received. This idea of doing away with the old-time junk pile and storing such stuff in bins by grades is but another phase of the reclamation service.

All material affected by this system has been charged to one department of the plant or another, so that the salvage is "velvet," while the only charges against it are the entries for labor in storing and readapting the stock. And as each foreman can reduce his own costs by keeping a watchful eye upon the usable parts, he is glad to boost the system, while every reduction in a department means money in the owners' pockets, which is what the responsible executives always are striving for.—J. B. Woods, in the American Lumberman.

Export of Spruce to River Plate at a Standstill

A prominent Nova Scotia lumber exporter, in a recent letter to the Canada Lumberman, says: "Owing to the excessive freight rate asked and also to the scarcity of tonnage the former export trade in spruce boards and scantling from Western Nova Scotia ports to the River Plate has stopped. No stock of any consequence is on hand, and no attempts at production are being made. The export business in spruce and pine boards to Cuba and the West Indies has also been very much reduced. Pine and spruce are very short. It is difficult to make up an export cargo of 300,000 to 400,000 feet of spruce boards at any one port. It is also difficult to obtain a charter for Cuba. Shipbuilding is active, and material is being turned into stock for the shipyards rather than into lumber."

Enquiring Into Lumber Production Cost

The United States Federal Trade Commission has been directed to make an enquiry into the actual present cost of producing ship lumber required for the emergency fleet. This is a part of a comprehensive plan to facilitate the purchase of war materials and supplies. It is expected that a uniform plan of procedure will be arranged for the investigation of many materials, including steel, lumber, fuel oil, gasoline, coal, cement, etc. A large number of well-trained accountants and investigators have been secured for this work, and it will be carried out as quickly as possible. The investigation is an emergency enquiry, and comprehends cost of production only.

Employees Set Example in Patriotism

A practical illustration of patriotism was given recently by the employees of the Freeman-Smith Lumber Company, Millville, Ark., when they enthusiastically and unanimously voted to substitute for the usual holiday on the 4th of July a full day's work, the entire proceeds to be given to the Red Cross. Nor is this all that the employees are doing. For the next four months they will each give one day's wages a month to the Red Cross. Much the same spirit of sacrifice is being exhibited at a number of other large lumber manufacturing plants in the United tSates.

The longest wagon bridge in the world—10,392 feet in length, nearly two miles—crosses an arm of Lake Pend d'Oreille, at Standpoint, Idaho. It required 1,864,109 feet of lumber to construct this bridge, which included 2,748 cedar, fir, and tamarac piling, the combined weight of which was approximately 7,478,000 pounds.

Disston Issues Internal House Organ

Henry Disston & Sons, Inc., of Philadelphia, have inaugurated a monthly house organ for employes of the company, the first issue of which appeared July 2. The title of the publication is "Disston Bits," which has a double significance, "bits" being another name for the teeth of inserted tooth saws, one of the company's products. As the announced purpose of the publication is the stimulation and crystallization of good-will and fellowship among the employes, it has been considered desirable that all illustrations, cartoons, and editorial matter be the work of the employes themselves, and the paper is being published along these lines. From the appearance of the first issue there is every indication that ample talent is available among the 3,600 employes of the company to produce a very cerditable publication. "Disston Bits" has eight pages, 9 x 12, and comprises several departments, including editorial, sports, safety first, etc. "Disston Bits" will not in any way conflict with the "Disston Crucible," the trade organ of the company, which has been isued for several years, as the objects and purposes of the two publications are entirely dissimilar.

A Compressor Bulletin

Bulletin K-300-A, illustrating a line of power-driven, single-stage, straight-line air compressors manufactured by the Canadian Ingersoll-Rand Company, Ltd., of Montreal, has just been issued. These machines are designed for motor or belt drive, and are furnished with a special short belt drive where floor space is a consideration. They are intended for use in industrial or mining plants where units of 950 cubic feet displacement and under per minute are required. Eighteen sizes are built, giving a wide range of choice. "Circo" leaf inlet and outlet valves and the dust-proof, self-oiling, and self-contained construction of this type of compressor are fully described.

Severe Test of Atkins Saws

The accompanying illustration represents a Knight Dog used in the band mill of the Wilderness Lumber Company, at Nallen, West Va., U.S.A. Its lacerated condition is plainly shown, together with "splinters" of steel which were found after this Dog had come in

contact with an Atkins band saw. The splendid quality of Atkins silver steel saws was clearly demonstrated, as the saw was not damaged to any appreciable extent; in fact it was not removed from the wheels, but merely pointed up and used until the run was finished, as can be vouched for by two employees of the company, W. T. Hensley, filer, and John Eldridge, sawyer.

The Cuban Lumber Trade

Mr. J. C. Manzer, representing the Department of Trade and Commerce in Havana, Cuba, under date of May 31, writes as follows regarding the trade of Cuba in lumber: "The increasing lumber trade of Cuba should be of especial interest to Canadian lumber exporters. During the year of 1916 the imports of lumber by Cuba reached a total of 189,598,629 feet, valued at $7,000,000 c.i.f. Cuba. Fully one-half of this amount arrived by schooner."

Lumber Arrivals During the Year 1916

	Feet.
By schooner	95,395,246
Steamer	58,346,030
Barge from Key West	19,994,504
Ferry from Key West	15,862,849

A prominent pulpwood buyer interviewed recently at Cobalt, Ont., said that owing to scarcity of labor and the unusual trouble with flies owing to the continued wet weather, the supply of hand-peeled pulp that would be available for shipment from Northern Ontario during the present summer would not be more than 40 per cent. of normal.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) $2.10 per inch, each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Maple and Birch

Wanted several cars 4/4 No. 1 Common Maple and Birch; also few cars of thick stock, either dry or this year's cut. Box 583, Canada Lumberman, Toronto, Ont. 11-14

Wanted

Wanted second-hand timber, Fir, Spruce or Pine. State condition and price. Box 593, Canada Lumberman, Toronto, Ont. 12-15

Pulp Wood Wanted

We are prepared to buy large quantities of pulp wood for export to United States. If you are cutting and want best prices, write to Box 602, Canada Lumberman, Toronto, Ont.

14-15

For Sale–Lumber

Lumber For Sale

300,000 ft. B.M. 1 x 4 and up Clear and No. 1 Spruce.

400,000 ft. B.M. 2 x 4 to 2 x 10 Spruce. Piled widths and lengths separate.

GEO. C. GOODFELLOW,
c Montreal, Que.

Spruce For Sale

Standard Spruce Lumber, Mill Cut, for sale. Quantity, two million feet. Quality fourth and better. Piled width, thickness and length separate. Apply,

The St. Lawrence Lumber Company,
81 St. Peter Street,
14-14 Quebec, Que.

For Sale

100,000 ft. 1 in. dry Cull Birch.
150,000 ft. 3 x 6, 6/16 ft. dry Sixth Quality Spruce.
200,000 ft. 1, 2 and 3 in. C. Cull White Pine.

FRED T. SMITH,
310 Board of Trade Bldg.,
14-17 Montreal, Que.

For Sale—Dry Hemlock

50,000 feet 1 in. x 9 in.
75,000 feet 1 in. x 10 in.
75,000 feet 2 in. x 10 in.
25,000 feet 2 in x 12 in
Immediate shipment.

F. McGIBBON & SONS,
14-14 Sarnia, Ont.

Dry 1916 Stock For Sale

1 x 12 in., 12/16 ft. Com. and Dressing, White Pine, 125,000 ft.
1 x 4 in. and up, White Pine No. 2 Mill Cull, 200,000 ft.
2 x 6 and up, White Pine No. 2 Mill Cull, 100,000 ft.
1 x 4 and up, mill Run Spruce, 300,000 ft.
1 x 3 Mill Run Spruce, 35,000 ft.
1½ x 4 ft., No. 1 White Pine Lath, Two Cars.
1½ x 4 ft. Mill Run White Pine Lath, Two Cars.

The Elgie & Jarvis Lumber Co., Ltd.,
18 Toronto Street,
14-14 Toronto, Ont.

For Sale–Machinery

For Sale

One latest improved Wickes No. 10 52-in. Gang complete with saws and filing equipment, 1 Kilgore Cant Crane, Steam Board Flippers.

GOODMAN LUMBER COMPANY,
14-t.f. Goodman, Wisconsin.

Machinery For Sale

16 in. x 38 in. Wheelock Engine.
Leather Driving Belt, 62 ft. 3 in. x 22 in., double.
No. 3 Jewel Dynamo Engine.

R. LAIDLAW LUMBER CO.,
11-14 Toronto, Ont.

For Sale

One No. 5 C. B. Rogers 15 x 6 S. H. Planer and Matcher, with countershaft and:
1 pair 1 in. Shimer Flooring Heads.
1 pair 1 in. Shimer Shiplap Heads.
1 pair 3 in. Shimer Flooring Heads.
1 pair 4 in. Shimer Jointer Heads.

The Bertrand, Lockhart Lumber Co., Ltd.,
13-14 Port Arthur, Ont.

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

BUILDING SUPERINTENDENT open for position, any kind of construction. Box 603, Canada Lumberman, Toronto, Ont. 14-15

A PRACTICAL LUMBERMAN, forty years old, with twenty years' experience, is open for engagement June 1, 1917. Last ten years with very large Canadian firm as superintendent and sales manager. Best of references. Box 496, Canada Lumberman, Toronto, Ont. 2-18

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

WANTED a first class right hand double cut band mill sawyer. Box 600, Canada Lumberman, Toronto, Ont. 14-14

WANTED MAN to take charge of Planing Mill. One who is capable of setting up machines, filing and grinding pattern knives. Address Drawer F., Sarnia, Ont. 13-t.f.

Business Chances

For Sale

Timber Limits and Sawmill, estimated fifteen million feet of hardwood and ten million feet soft woods. Sawmill capacity 25 M. feet, shingle mill 125 M. Docks, tug, booms, logging outfit, houses, etc. Price $35,000.

The Manitoulin Lumber Co., Ltd.,
11-22 Walkerville, Ont

Sawmill For Sale

Complete Sawmill for sale, cheap and easy terms. Capacity 20,000 feet per day. Field Lumber Company, Limited, Field, Ont. 11-t.f.

Jobbers Wanted

We wish to let several contracts to take out logs on Berth No. 6, being broken front lying between the Magnetawan and French Rivers. This berth is all convenient to Canadian Northern Railway.

John Harrison & Sons Company, Limited,
Saw and Planing Mills,
9-t.f. Owen Sound, Ont.

Mill Plant and Limits For Sale

43 Miles Limits on 31 Mile Lake, Gatineau Valley, containing Basswood, Spruce, Fir, Pine, Cedar, Birch, Maple and Pulpwood.

New Waterous 8 ft. Improved Double Cut Band Mill complete. Steam Alligator, Boats, Sleighs, Wagons, Harness, etc. For further particulars apply to

A. W. STEVENSON,
P. O. Box 2624,
8-t.f. Montreal, Que.

UNDER THE WINDING UP ACT

In Re: Damien Lalonde, Ltd.

1000 Christophe Colomb St.,

MONTREAL

Tenders will be received by the undersigned till Monday, July 30th, 1917, at noon, for the purchase en bloc or in part of the undermentioned immovable properties.

10. 26 lots of land in St. Denis Ward, City of Montreal, on Christophe-Colomb St., forming 114,272 feet of land, with buildings thereon erected, comprising 2 storeys solid brick Building 150 x 90 ft., iron framed, concrete foundations and ground flooring, gravel roofed, upper floor mill construction with sawmill and joiner shop, kiln and machine shop, heating and lighting systems, waterworks and one 8-car siding to C. P. Ry., and all the machinery therein contained.

Three lumber sheds, 2 shell and box factories, stables and keepers' dwelling, etc.

No tenders necessarily accepted.

For information apply to the Liquidators,

F. R. Vinet,

P. H. Dufresne, Liquidators,
99 St. James Street,
14-14 Montreal, Que.

Miscellaneous

PROVINCE OF QUEBEC

Department of Lands and Forests

Quebec, 2nd June, 1917

Public notice is hereby given that, in conformity with the law, on the 21st of August next, at 11 o'clock a.m., at the office of the Minister of Lands & Forests Dept., Quebec, there will be offered permits to cut timber on lands belonging to the Crown in the Upper-Ottawa, Lower-Ottawa, St. Maurice, Lake St. John, East and West, Saguenay, Rimouski West and Bonaventure West agencies, comprising several large blocks in the Abitibi, Upper-Ottawa and head waters of the St. Maurice and Gatineau and on River Chamouchouan.

Permits will be adjudged to the highest bidder.

The price of adjudication is payable in 3 equal instalments.

The permit to cut will be subject to the ordinary conditions of the Law and Regulation and the grantees of any of the aforesaid territory must, within a delay of three years, manufacture, in the province of Quebec, with the timber cut in said territory, either pulp or paper in the proportion of ten tons per day, or sawn lumber in the proportion of ten thousand feet board measure per day, per hundred square miles.

Further information may be had by applying to the Department of Lands & Forests.

Elzear-Miville Dechene,
Deputy-Minister,
13-16 Dept. of Lands & Forests.

Canadian Foresters in France

One of the mills of the Canadians behind the trenches in France runs day and night, and is rapidly eating up the neighboring wood. The noise of the circular saw mixes peculiarly with the constant throbbing in the air caused by the discharge of the heavy guns. A short distance from the sawmill are the remains of buildings wrecked by enemy shell fire. A thousand feet an hour is the average output of the mill, and it will be doing better than

this very shortly, as soon as the new machinery arrives.

Timber operations within range of German guns very naturally have their own peculiar inconveniences. Of course there is always the risk of the mill and its workers being blown to atoms by shell or by bombs from aircraft. Such dangers are part of the ordinary business of the day in these parts. The trees with which this particular mill is dealing have been "strafed" by the Boche intermittently for months past, which brings another problem to the workers in the mill. Chunks of shell are embeded in many of the trunks, and in the course of months these chunks have in many cases become overgrown and difficult of detection through superficial inspection, consequently there is trouble when such a trunk comes under the saw. But in spite of this and other difficulties the mill constantly turns out its thousand feet an hour, producing big balks for road mending and for the building of dugouts, lighter stuff for pit props and trench revetments, and timber of every kind which can be put to any use in the business of the war.

A journey of many miles from here into one of the fairest parts of France, into a part where the peasant even yet runs into the road to stare at the spectacle of soldiers in khaki, reveals still more of the Canadian foresters at work. They have a most interesting body of assistants—Boche prisoners. The German in the French woods seems happy in his lot. There may be seen a couple of score of them engaged in "stumping." From the manner in which they hauled at the tackle there was no reason for apprehension that any of them would drop from sheer exhaustion. They seemed tractable enough, though, and went about the work with at least a show of interest. All were sturdy fellows; some elderly, but the majority in the prime of life. One wore the ribbon of the Iron Cross.

They were all in German uniforms of field-grey, but the headcovering was most varied. A good many had the round cap of the German infantry, others wore trench helmets, one or two had the woolen "comforter" cap such as was sent out to our own men in the winter, a few wore ordinary civilian cloth caps. Here and there at a short distance were the soldiers of the guard, from English infantry battalions. The guard was not numerous. One man with a rifle is capable of looking after a power of his fellows who cannot summon such a weapon among them.

Work was suspended punctually at midday, and the company trooped off to dinner. It was served out hot under the trees by the prisoner-cook. An imperial officer accompanying us spoke a sentence to the man in his own tongue and learned that the prisoner was a cook by profession. "I speak half a dozen Indian tongues, but I believe it is the first time I have tried to speak German for seventeen years," remarked the officer. Having duly received their portions in their tins, the prisoners squatted in groups under the trees and jabbered away to one another volubly. More potatoes were put away in that picnic of Germans in a French wood than many people had consumed in London during the previous couple of months.

Another long journey through most beautiful country and they reached a third Canadian mill. Save for the villagers the Canadians have the district pretty well to themselves, and here, again, they are rapidly letting daylight into the woods.

In these French forests the lumbermen of Canada are working among their own peculiar element in the same manner to which they are accustomed at home, save that they are under military rule. Before the war is over the forestry battalions will have left their mark on France in a double sense.

Wood and Coal as Fuel

The difference in fuel value between wood and coal is considerable. Beech wood gives 8,591 B. th.u., a little more than half of the best coal. Here is a point on which the popular opinion is generally wrong. Fir yields 9,063 units. Most people have an idea that the hard woods, such as beech, oak, and birch are better than the soft wood, and they will give a better fire than the fir and the pine—pine gives 9,153 units.

The reason why people think so probably is because the hard woods do not give off quite as much gas as the soft woods, and so burn in the grate in the same way as anthracite coal. Oak only gives 8,316 units; straw gives 11,322. Straw is an exceeingly good fuel if it is compressed into blocks and burnt on the grate like other fuel. American coke gives 14,400; Durham coke gives 14,582. Pure carbon-like really first-class wood charcoal gives 14,647, so that some of these cokes, which are almost pure carbon, give nearly as much as pure carbon. This shows that carbon is the founation on which all the fuels are based. Some are a little higher in heat value than carbon, because they contain hydrogen; some a little lower because of the ash. A good coal may be taken at 14,000 heat units, and some cheaper coals are not worth more than 12,000 heat units.

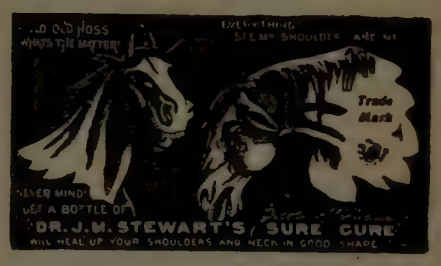
PHILIP T. COOLIDGE
FORESTER
Technical training and ten years' experience. Timber Estimating and Mapping. Supervision of Lumbering Contracts. Surveying. Forest Planting.
Stetson Building, 31 Central Street
BANGOR, MAINE

Union Lumber Co.
Limited

White Pine
Red Pine
Spruce
Red and Jack Pine
Lath

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

Insure your horses against sickness



Why not? You protect your mills against fire by installing fire-fighting apparatus; you protect your employees against accident by the use of machinery guards—then why not protect the health and efficiency of your horses? And how? By keeping in your stables a good supply of Dr. Stewart's Veterinary Remedies.

It may be the means of saving the life of many good horses, and will keep them sound and vigorous at all times.

A LIST OF DR. STEWART'S VETERINARY REMEDIES

Stewart's Sure Cure (antiseptic gall cure) the original, in liquid form, 16 oz. bottles	$9.00	doz.
Stewart's Excelsior Liniment, 32 oz. bottles	9.00	"
Stewart's Lightning Colic Cure, the only colic cure that removes the cause, 16 oz. bottles	8.00	"
Stewart's Pure Condition Powders, 2 lb. air tight tin can	5.00	"
Stewart's Hoof Ointment, 1 lb. can	5.00	"
Stewart's Heave Relief, large can	5.00	"
Stewart's Cough and Distemper Cure, 50 doses to bottle	7.00	"
Stewarts Proud Flesh Powders	2.50	"

The Palmer Medical Co., Limited
Windsor, Ont.

Review of Current Trade Conditions

Ontario

The most important feature in the lumber trade in Ontario at present, is the fact that shipments from mill points are now being made much more extensively than earlier in the year. Some retailers in the larger cities are even complaining of receiving too much, and state that their sidings are being choked up with cars. Under such conditions it seems to be good sound advice to suggest that retailers should lay in stocks now instead of waiting until the fall, when the movement of crops will undoubtedly cause the annual car shortage to develop. All the signs this year indicate that the shortage will be much more acute than in former years. The general trade situation continues unchanged. Munitions plants are actively engaged and are consuming large quantities of lumber. Furniture factories, agricultural implement factories, etc., are also very busy. The building situation shows very little improvement throughout the province, though in some of the larger cities the moderate improvement noted earlier in the year is continuing. At Toronto, for instance, building permits for the year to date are greater than those of 1916 during the corresponding period. There is quite an improvement in the building situation at Toronto in connection with factory and warehouse buildings, but unfortunately for the lumber business, most of this is being designed in reinforced concrete.

Prices of practically all lines of lumber are firm. The trade in white pine with the United States is very active and quite a large quantity of 3-in. deals which were manufactured for the English market are being sold in the United States, in many cases to be used for various purposes arising out of the war. Hemlock is still very strong and scarce. The outlook is for continued scarcity and firmer prices, on account of the labor situation at the mills and the probability that the demand will exceed the output considerably, at least well into next year. Lath are quite high in price at the present time, but there is a feeling among the trade that on account of the lack of house building they may be expected to drop in price to some extent. No heavy decrease is expected, but logically the situation looks like an easing off. The bulk of the manufacturers in Quebec and the eastern provinces, however, are not making any spruce lath this year, devoting their attention largely to the production of pulpwood.

B. C. fir in short lengths is moving well, the demand is fairly active and shipments are coming in satisfactorily. The Dominion Government have notified B. C. mills that long lengths in B. C. fir must be held for government account in connection with shipbuilding.

Shell box manufacturers at Ottawa have recently completed most of their contracts on hand, and the result is a falling off in enquiries for stock from this quarter. Stocks of dry lumber are decreasing steadily, but the new cut is coming on the market more extensively. Prices continue firm, with an upward tendency. A good demand is reported for white pine lath, and some price advances are reported. The Ottawa Valley output this year is expected to show a decrease.

The export trade continues to suffer on account of the scarcity of vessels. The entry of the United States into the war is expected to bring relief in this connection, as they will probably consume great quantities of lumber in munitions work.

Eastern Canada

Montreal wholesalers report a greatly increased demand from the United States. This is the result of the great requirements of the United States Government for shipbuilding and camp use and for other purposes connected with the war. Prices all continue strong, and the tendency is still upward. Local trade in Montreal is slow; the yards buy only from hand to mouth. Building operations are very light, and permits show a slight falling off for the first six months of 1917. In other parts of the Province of Quebec building operations are a little more active. Exports to the United Kingdom are still very small, consisting entirely of spruce for the government and a slight quantity going forward on South African account.

The market for spruce frames at Boston has been strengthened by the placing of large government orders for spruce to be used in the construction of army cantonments. Practically all important eastern spruce mills are now turning out government schedules on urgent orders which are obliging them to refuse private business. The tendency of price is upwards. Canadian mills are shipping their surplus random to New England and New York markets, and so the price is not advancing. Spruce boards are very firm and the demand is brisk. Matched spruce boards are selling well, large quantities having been taken for army buildings. Further advances are expected generally. More strength is reported in the Boston market for hemlock, and record prices are being obtained for quick shipments of boards and planks. The Boston hardwood market is very firm with prices moving upward and a large volume of business in progress. Ability to make shipments seems to be the chief question considered, rather than price. Birch and maple are in strong demand, and ash, basswood and oak are active. Shingles are quiet at Boston, but prices are steady. It is expected that army engineers will decide to use wood shingles on the 700-odd buildings at the Ayer cantonment. Lath are quiet and prices are about steady, though in a few instances manufacturers are not quite so stiff in their quotations.

A Boston firm of wholesalers report that prices are firm and stocks are low in retail yards, but building operations are quiet. General manufacturing throughout New England is good, and pine is in fair demand.

United States

The chief subject of interest to United States lumbermen during the past fortnight has been the extensive purchasing of lumber by the government, and the filling of these orders. In the southern pine market this business has overshadowed ordinary business almost entirely. Nevertheless, it appears quite evident that some buyers are anticipating future requirements so as not to be short of stock in the fall. The arrival of the government upon the market at a time when ordinary business is quiet makes it certain that there will be no unsold stock accumulating at the mills this year. An immediate result of this development is the decrease in the number of transit cars that are being offered. A number of price changes are reported, but they seem to be of a varied nature, increases and decreases balancing one another, and making the fluctuations appear to be in the nature of establishing a proper relation of values between different grades. One hundred and forty-six southern pine mills, during the week ended June 29th, shipped 111,422,208 feet. Their production was 84,740,055 feet, and orders booked amounted to 95,381,760 feet. The shipments were the heaviest for any week during the present year and the production was about 15,000,000 feet below normal.

The government requirements of spruce for cantonment construction and for aeroplanes continues on an increasing scale. It is rumored that the government is considering the prohibition of the export of spruce that can be used for aeroplane manufacturing and that control of prices of aeroplane grades may be taken over by the government.

White pine producers are experiencing a great deal of difficulty on account of the labor shortage. The demand for their stocks is increasing and stocks on hand are being depleted. Building operations in some of the most important white pine markets are reviving. Prices are firm. The demand for hemlock continues very strong and government requirements are an important factor in this trade, as hemlock is being used for cantonments far more extensively than was at first expected. The market continues firm with a slight upward tendency.

Hardwood manufacturers report a continued increase in the demand for their products, with the exception of a few lines that are not in much demand at this time of year. The government's requirements are increasing steadily. Manufacturers are unable to obtain sufficient cars to move all the lumber they are selling or to get the logs they need to the mills. There is a great demand for ash, hickory and oak for industrial uses and prices seem to be regulated largely by the ability of the manufactures to deliver. Very little stock is being accumulated in mill yards, nearly everything being taken by the buyers right from the saw. Prices are firm and many lines show an upward tendency.

Great Britain

There is nothing to report in connection with the London timber trade that can be considered really new. The market is very quiet, importers and merchants alike report that there is very little business. Importers are not inclined to look with favor upon prices that shippers are asking. They are hesitating to purchase deals at such prices as £46 to £48 per standard, and battens at £42 to £44, or 2 x 4 to 2 x 6 at £40 to £42, in the docks or at the wharves. At such prices, even the boldest operator is inclined to hold off from the market. London importers have been purchasing sparingly of planed goods at £30 per standard c.i.f. London basis.

The numerous regulations issued by the Timber Control Department continue to restrain the operations of the timber trade at Man-

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

chester, and importers are complaining bitterly against the delays and other difficulties connected with the securing of permits, claiming that much of this is unnecessary.

Generally speaking there is a fair trade in progress on the formal certificates and guarantees as between merchants and merchants. The trouble comes in most cases later, when the consumer enters the transaction. All kinds of stocks of imported timber are low and the import is far below normal. Prices of Scandinavian stock are being held so high by shippers that very few contracts are reported. Norwegian shippers are asking £30 per standard, f.o.b. for deals, battens and scantlings, and £32 c.i.f. for floorings with the addition of war risk, insurance and difference in the rate of exchange. Swedish stocks are being held for £46 to £48 c.i.f. for deals, £44 for battens and £42 for scantlings.

The spruce situation at Liverpool shows no change. The arrivals have been light, and the outlook for future imports is poor. Stocks have been brought down to a very low point. It is considered doubtful whether the permission to import Scandinavian goods will afford any important relief. The whole trade is a unit in the belief that the removal of obstacles in the way of importing Canadian spruce would be a great benefit. This, however, does not seem to be a likely development at present and more and more reliance will have to be placed on Scandinavian goods. Imports for government requirements have been in fair volume and are being moved steadily by the railways. A good demand for birch planks and logs continues, but stocks are so low that not much actual business is put through. The demand for Quebec birch planks is particularly good, 2½ in. and 3 in. being in greatest favor.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Montreal Wholesalers Report Strong United States Demand

Montreal, July 6.—(Special to the Canada Lumberman.)—The feature of the trade during the past two weeks is the increased demand from the United States. Wholesalers doing business with firms across the border state that orders are coming forward extensively and that enquiries are also much better. This is due to the immense call for United States stock for shipbuilding and camp uses; and, while there may be a falling off in our lines for building, this will be more than counterbalanced by the orders sent to Canada for purposes arising out of the war and to supply deficiencies caused by the heavy United States Government requirements.

Prices continue to hold up, and the general opinion seems to be that there is little likelihood of any reduction. The tendency will be the other way, especially if there is a continuance of the good buying from the United States.

Local business is slow, the yards buying from hand to mouth. This is accounted for by the condition of the building trade. During the last two months the permits have shown a very decided decrease, more than nullifying the excellent figures during the first four months. For June the total was $338,870, a falling off of $409,180. The total for the year to date is $2,447,784, a loss of $7,285. While building in the city is thus falling behind, reports from other parts of the province indicate that construction is fairly good, with the same features that characterized last year—a considerable number of churches and educational buildings.

Firms dealing in British Columbia lumber are still in doubt about the course of the Imperial Munitions Board regarding the use of British Columbia timber for Eastern shipbuilding. It seems to be the regulation now that either spruce or pine must be used. This means that some cars on the way and ordered by shipbuilders must be held up, and that a very important part of the trade done by wholesalers handling British Columbia timber is cut off, at any rate for the time being. The probability is that the regulation will have to be altered, as it is stated that timber of lengths required cannot be secured except in British Columbia. The matter has been taken up with the Munitions Board.

The exports to the United Kingdom are very small, being restricted to spruce for the government and a little for South Africa. Efforts have been made to obtain permits for stock for private consumption, but the British Board of Trade declines to issue any.

New Stock More Plentiful Now at Ottawa

Ottawa, July 6.—(Special to the Canada Lumberman.)—The Ottawa lumber market has experienced a considerable change during the last two weeks, due to a decline in the number of enquiries and orders received. There has been little business going on, but there is a feeling among the trade that business will pick up within the next two or three weeks. Stocks of dry lumber are diminishing daily, and the market is by no means overstocked—in fact, in the opinion of some manufacturers, stocks of dry lumber are low, but it is generally said that they are sufficient to meet the present demand. More of the green cut is coming on the market, replacing the failing supply of dry lumber of practically all grades. Prices remain firm, with an upward tendency.

One of the most important decreases in the number of enquiries and orders to the manufacturers is due to the makers of shell boxes, who are not buying stocks, as they are near the expiration of their contracts, and are using material purchased in the spring to finish out with. No. 1, No. 2, and mill run grades of white pine lath are steadily increasing in price, though there is not a heavy demand. The lumber cut of the Ottawa Valley this season is not expected to equal that of last season, though one, or perhaps two, mills will exceed their last season's cut. The destruction of the Colonial Lumber Company's mills at Pembroke by fire will eliminate a considerable part of the season's cutting operations. John R. Booth will not cut as much this year, and at present is operating the mills with day shifts and with only a few saws going at night.

Several of the mills report a large falling off in export trade, due to the shortage of bottoms. With the United States utilizing a large amount of lumber in munitions work, manufacturers and retailers look for an increase in Canadian trade to the United States shortly. Two mills which have a fairly large American business have filled several extra orders since the United States declared war. During the last two weeks, however, the enquiries reaching Ottawa from the United States have shown a falling off in comparison with the four preceding weeks. An order totalling 60,000 9.2 shell boxes will be completed by the plant of the estate of James Davidson next week. This firm will cut 9,000,000 feet of lumber this season. Three hundred men are engaged. One hundred and fifty of them are in the woods or on their way thither, and the remainder are employed in sawing operations at Fort Coulonge, P.Q. Operations at Fort Coulonge will cease about August 1.

The proposed 15 per cent. increase in freight rates for the transportation of lumber is causing a good deal of concern locally. Mr. Frank Hawkins, secretary of the Canadian Lumbermen's Association, states that, while the association is not likely to oppose an increase, the lumbermen view the 15 per cent. advance as too heavy, and are of the opinion that the railways could transport lumber profitably at a smaller percentage of increase.

The present export situation is one of the most difficult that lumbrmen have ever had to deal with. Stocks sawed for the English market before the embargo went into effect are not of the desired sizes for use in the American market.

The demand for building materials continues small. Most of the demand for such lumber at present is for patching and repairs.

Boston Market Report—Manufacturers in Strong Position

Boston, Mass.—(Special to the Canada Lumberman.)—Conditions existing in this market at present as regards the retail trade are, so to speak, right between "hay and grass." In other words, the majority of the retailers have adopted a waiting policy in regard to placing many new orders.

In our opinion, the two principal reasons for this are: First, that the demand for house building has fallen off to its low ebb; second, the continued very high prices on all kinds of materials.

One reason for the falling off in the demand for house building is the lack of incentive to speculative building because of the returns which people receive from this class of investment, and also because it has been more difficult to raise sufficient funds for this speculative building at the increased cost of materials and labor.

The curtailment of buying by the retailers for the ordinary purposes has been more than offset by an increased outside demand. One single instance is the present demand of the government, which is very large. Augmenting these conditions with the moderate production this year, we feel that the price of lumber will remain at its present level and that, when the retailers, after the midsummer lull, come into the market again for their fall requirements, there will be a further advance.

In addition to the above, we have not taken into consideration the

PURER MILK

for Your Men at Less Cost to You

Liquid milk has been replaced in cooking by the modern milk powder, KLIM.

KLIM is made from the purest and freshest milk received daily from Ontario farms at our plants in Burford, Hickson, Brownsville and Belmont. The milk is separated, pasteurized and reduced to powder form by the most sanitary mechanical process obtainable. KLIM is used in all cooking, and is more

CONVENIENT,
TIME-SAVING,
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than liquid milk.

KLIM costs less than any other form of milk because it will remain sweet and pure until the last grain is used. It does not require ice in Summer nor will it freeze in Winter.

You save 75 per cent. in freight charges, as you pay freight on nothing but milk solids which contain all the food value in the milk.

If you have not tried KLIM, order a sample 10 lb. tin from your supply house to-day.

Canadian Milk Products, Limited

10-12 William Street - TORONTO

Also Stocked by—W. H. Escott Co. Ltd., Winnipeg, Calgary, Regina, Edmonton
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Original "Dunbar" Machines

We are the original and the only makers of "Dunbar" Shingle Machines, Lath Machines, Clapboard Machines, Steam and Gasoline Logging Engines. Each is the best for its particular work. Are you using the best?

Lath Machine

From our many years of experience we evolved this "Dunbar" Original Lath Machine. Every improvement that could be suggested, every time-tested idea for the betterment of product and for greater speed, has been incorporated in this machine. We believe it has no equal, and there are a great number of mill men throughout Canada who share this belief with us. Carefully constructed of high grade materials and designed to work steadily under the hardest conditions.

Steam and Gasoline Logging Engines

Conditions in Canada necessitate an engine that will stand any amount of strain and hard work in the lumber industry. With this idea in mind we have brought out the "Dunbar" engines perhaps a little stronger than is really needed. They do their work easily and willingly, and stand a great amount of hard usage. Built entirely in Canada for the Canadian lumber trade.

Clapboard Machine

You will need no excuse for the quality of your product if you use the original "Dunbar" Clapboard Machine. Expert in every detail. This machine will give you the very best service under most trying conditions. It will turn out work without delays. It will need practically no repairs and will increase your output. We cannot recommend it too highly because it is giving this very service to lumbermen in all parts of this country.

Send for catalogues of any or all of these machines.

Dunbar Engine & Foundry Co.

WOODSTOCK, N.B.

proposed advance in freight rates and the probable duties which will be assessed on lumber coming from Canada.

These increases will have to be paid by the consumer, as the mills are in a position, under the present conditions, to be a little more dictatorial in acceptance of business, so that they are accepting orders with the provisions that any increase in freight or any duties which may be assessed are to be added to the price at which the order is taken.—Boston Wholesaler.

Quebec Cullers' Report

The following comparative statement of timber, measured and culled to date, is furnished by the Quebec Supervisor of Cullers:

	1915, cu. ft.	1916, cu. ft.	1917, cu. ft.
Waney white pine	139,240	16,680	78,040
Oak	78,160	167,560	37,920
Elm	46,840	58,880	66,520
Ash	480	240	320
Birch and maple	42,240	46,880	15,800

Box Shook Openings in Argentina

Trade Commissioner Reports Opportunities for Canadians to Share in Important Market

Large numbers of boxes are used by the Argentine packing houses for the purpose of shipping the various classes of meat products, such as sweetbreads, livers, etc. The boxes are purchased knocked down and afterwards put through a nailing machine at the works. In normal times most of the shooks are imported from Sweden and the United States, but lately, owing to the larger requirements consequent upon the increased European demand and the difficulties experienced in obtaining regular supplies from abroad, orders for considerable quantities have been placed locally.

Enquiries made at two of the larger establishments regarding the style, measurements, and approximate prices of boxes in use elicited the following information, which may be of interest to Canadian box-shook manufacturers.

Meat boxes in general are required to be made of a non-odorous spruce or similar class of wood. They are shipped well tied up in bundles, containing 20 tops, sides or heads, and 25 bottom pieces each, each bundle being bound tightly with baling wire. Meat boxes are allowed into Argentina duty free.

The dimensions given for the five principal types used by one of the largest packing houses are as follows:

	Width. Inches.	Length. Inches.	Depth. Inches.	Ends. Inches.	Sides. Inches.	Tops and bottoms. Inches.
No. 1 ...	9⅜	12 15/16	11 3/16	¾	½	½
No. 2 ...	16	15 13/16	9	¾	⅝	½
No. 3 ...	12⅜	18½	12½	¾	⅝	½
No. 6 ...	17	24	8	¾	⅝	⅝
No. 7 ...	17	26	12	1	⅝	⅝

The measurements given above are interior. The prices c.i.f Buenos Ayres which are being paid to-day for meat boxes of the above dimensions are as follows:

	Each.
No. 1 Parana pine	$ .25
No. 2 spruce pine	.42
Parana pine	.34
No. 3 spruce pine	.51
Parana pine	.40
No. 6 spruce pine	.68
Parana pine	.57
No. 7 spruce pine	1.02
Parana pine	.72

Parana pine is a Brazilian wood, somewhat similar to that generally known as Brazilian pine, but is more yellow in color than the Brazilian pine, which has a streak of red. Parana pine is not, of course, so well adapted for the purpose of meat shipping as is spruce, but, as can be seen, it has a considerable advantage in point of price.

Another large English freezing establishment which specializes in corned beef is using two different sized boxes of the following dimensions:

To hold 48 one-pound cans—Inside measurements: Length, 17½ inches; width, 9¾ inches; depth, 8 inches. Wood measurements—Sides, 19 in. x 8 in. x ⅝ in.; head, 9¾ in. x 8 in. x ¾ in.; tops and bottoms, 19 in. x 11 in. x ½ in.

To hold 12 six-pound cans—Inside measurements: Length, 21½ in.; width, 13¼ in.; depth, 10¾ in. Wood measurements: Sides, 23½ x 9¼ x ⅝; heads, 12 in. x 9¼ in. x ¾ in.; top and bottoms, 23½ in. x 13¾ in. x ½ in.

Eighty per cent. of the total number of boxes used are of the first type—i.e., to hold 48 one-pound cans. Supplies of these boxes have been received from Europe, and some are occasionally purchased locally, and the printing in each case is different; those from Europe being ink-printed, whilst those purchased locally are fire-branded.

The present source of supply is Sweden, and the boxes, made of Norwegian spruce pine, well tied up in bundles containing 20 tops, sides or heads, and 25 bottom pieces each, work out at the following prices, c.i.f. Buenos Ayres:

Boxes to hold 48 one-pound cans—88c paper, at 44 and 1.0364—$0.373 United States gold.

Boxes to hold 12 six-pound cans—$1.31 paper, at 44 and 1.0364—$0.556 United States gold.

Boxes made of Brazilian pine, Brazilian spruce, and Argentine poplar have been used with good results.

In normal times the boxes were obtainable at prices 30 per cent. cheaper than those quoted above.

This freezing establishment is prepared to consider quotations c.i.f. Buneos Ayres, including the branding of its mark on the four sides, it not being of much importance the way in which they are marked, provided this work is well done and the boxes altogether good to look at.

A third company, owning two large plants, are at present using poplar shooks, made locally, for a large range of different-sized boxes. Quotations c.i.f. Buenos Ayres will be considered for shooks of the sizes given and for the quantities enumerated, which can be obtained from the Trade Enquiries Branch of the Department of Trade and Commerce, Ottawa..

How Much Money Should Be Spent in Yard Equipment?

The question of how much money should be spent in the erection of sheds and office building at a country point admits of much discussion and a wide divergence of opinion. The matter of the amount to be spent upon the office proper is largely determined by the degree of desire on the part of the owner to make a show-place of his yard. Beyond a certain amount spent to provide shelter for the working force and the records, any money spent upon an office building must be considered as spent for advertising purposes or to satisfy the personal vanity of the owner. With the latter we need not concern ourselves, as it is an undisputed fact that money spent solely for that purpose is outside the dictates of good business, and has no place in the category of the business side of a man's career.

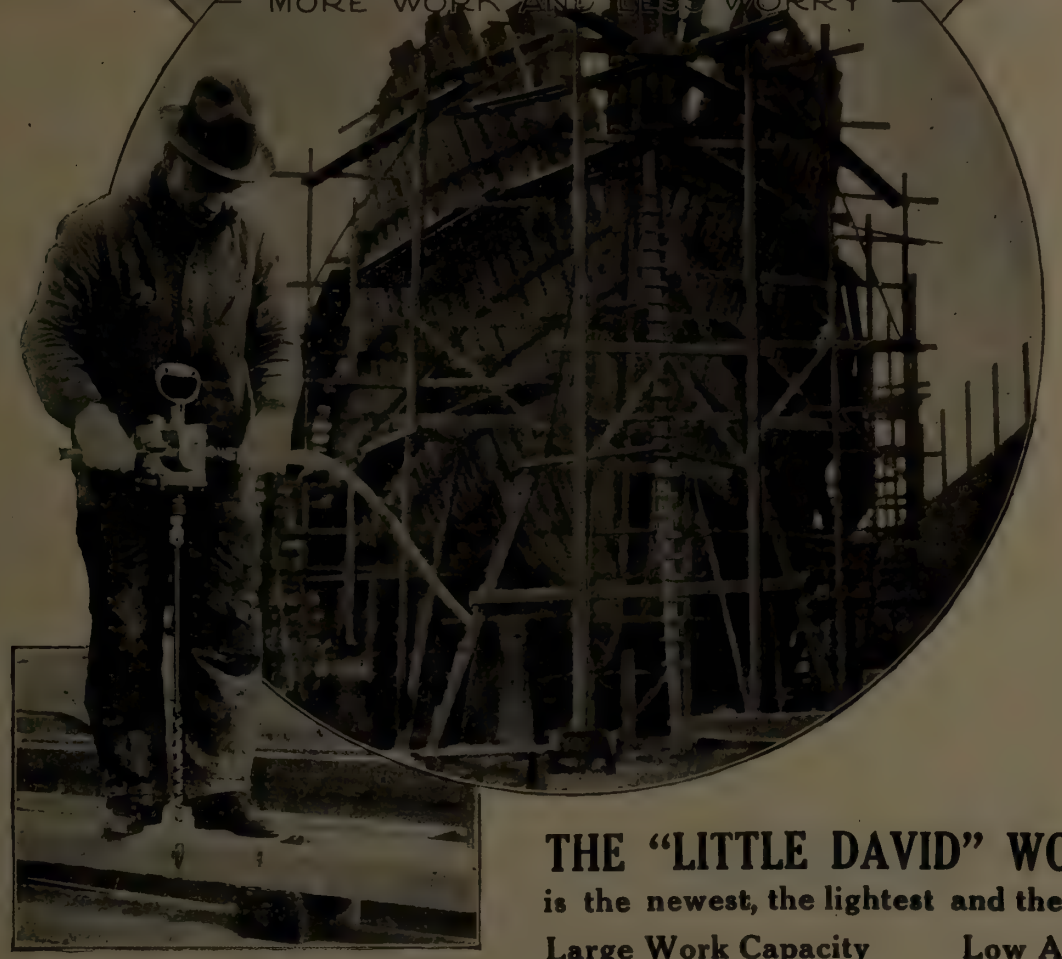
As to the matter of considering such money spent for advertising purposes, it is largely a matter of personal opinion and viewpoint. Some claim that money spent thus has practically no advertising value, while others claim that, spent with an eye to creating a demand for certain goods, it is well spent.

There is no doubt but that an attractive place of business, no matter in what line, is an aid to salesmanship. And by salesmanship I refer to that factor of the business which is directly responsible for the volume of business done. It is equally true that the tendency to make a show place of their place of business is growing rapidly with business people in all lines. This is largely the result of increased competition, which is responsible for a decrease in the volume of business done that is yearly bringing the sum total down to the dead line, below which it is impossible to make a profit. To combat this competition affords the only means to a man's survival in business. And there is a growing feeling that to make one's place of business more attractive to the buying public helps to combat it. Goods well displayed are half sold, and the possession of an attractive office of ample dimensions opens the way to the showing of certain specialties, the sale of which one is desirous of pushing, in a most advantageous manner.

What to Do With the Office

Too many lumber offices, more ornate than their neighbors, are, however, built without an idea to advertising value. The fact is lost sight of that it is possible to use in the interior finishing of the office certain items whose use is perhaps not so familiar to the general public as the materials ordinarily employed for such purposes; that it is possible to work into the interior construction certain specialties which one is featuring, in such a manner as to render them particularly appealing to the prospective purchaser of building materials. For instance, if a man is making a specialty of softwood veneer panels, it is senseless for him to put up an office and finish it throughout with lath and plaster or beaded ceiling. It is equally as senseless for him to hang an ordinary four-panel pine door in his office if he is making a specialty of a veneered five-cross panel fir door. Or to paint such a door as the last mentioned when it should have its natural beauty of grain brought out by an application of oil and varnish; or to lay an edge grain fir or yellow pine floor, if he is making an attempt to stimulate the sale of maple or oak flooring in his territory. Or if he lays the fir or yellow pine flooring, how can he hope to demonstrate the suitability of these materials for flooring, if he allows the floor to

YOU NEED "LITTLE DAVID"
FOR WOODEN SHIPBUILDING
MORE WORK AND LESS WORRY



THE "LITTLE DAVID" WOOD BORER
is the newest, the lightest and the most powerful.

Large Work Capacity
Easy to Operate
Low Air Consumption
Low Cost of Upkeep

Leading shipbuilding companies are standardizing "LITTLE DAVID" Tools because of their capacity for work, ready control and low air consumption. Other features which have turned the scale in favor of these tools are their simple construction and low upkeep costs.

Our No. 40 "LITTLE DAVID" Riveter is being widely used in wooden shipbuilding, for "horsing" in oakum, etc. This tool is a wonderful time-saver in this industry, where time now counts so much. Bulletins covering the "LITTLE DAVID" Tools, as well as prices, etc., will be gladly sent on request to your address. Write nearest branch office to-day.

"LITTLE DAVID" Tools for shipbuilding comprise Chipping and Riveting Hammers, Drills, Reamers, Grinders, Wood Borers, etc. The "LITTLE DAVID" Wood Borer shown above is made in three sizes, boring holes 1 in. to 4 in. The machine is reversible, and the largest size is about 10 lbs. lighter than other wood boring machines of the same capacity.

Another desirable tool is our CC-101 Drift Bolt Driver. With it, bolts can be driven in any position and at any angle. Two men with one of these machines, will drive a 1⅜" diameter bolt 5 ft. long, with 100 lbs. air pressure through oak with 1/16" drift at the rate of 5 ft. in 25 seconds. This is a great advance over driving these bolts with a sledge hammer. Our nearest branch will be pleased to give you full information.

CANADIAN INGERSOLL-RAND CO., Limited
COMMERCIAL UNION BUILDING, MONTREAL. CANADA

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Sydney Toronto Cobalt Timmins Winnipeg Nelson Vancouver

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Trade Mark

FOR SALE

Dry Birch

4/4	Log run, m.c.o.	30 cars
6/4	No. 1 Common and Better	3 "
8/4	do	5 "
10/4	do	2 "
12/4	do	3 "
12/4	Sound Hearts	5 "
14/4	do	2 "
16/4	do	5 "
20/4	do	1 "
5/8	6 ft. and up, 4 in. and up	1 "
4/4	No. 2 Common	5 "
5/4	do	3 "
6/4	do	4 "
8/4	do	8 "
12/4	do	5 "

Dry Maple

4/4	Log Run	1 car
6/4	No. 1 Common and Better	1 "
6/4	No. 2 Common	3 "
8/4	do	5 "
10/4	do	2 "
12/4	Sound Boxed Hearts	4 "
16/4	do	1 "
5/8	6 ft. and up, 4 in. and up average 4½ in.	1 "

Merchantable Spruce

2 x 4	in. Dry	1 car
2 x 6	in. do	1 "
2 x 6	in. Shipping Dry	4 "
2 x 8	in. Dry	1 "
2 x 8	in. Shipping Dry	1 "
2 x 10	in. do	2 "
3 x 4	in. up Dry	2 "

The above are some of our lines in stock, ready for prompt shipment.

E. M. NICHOLSON & CO.

202 Board of Trade Building

MONTREAL

become coated with dirt, instead of keeping it well cleaned and oiled at all times?

So much for the advertising value of a well constructed office building. It is an obvious fact that the lumbermen in a great many sections of the country are far behind the average merchants in other lines when it comes to making the most of advertising value out of that which they have at hand in their business. They are either notoriously lacking in the merchandising instinct, or, having it, have not as yet awakened to the necessity of developing that instinct if they are to hold their own.

Now, as to the advisability of a large outlay for office and shed, even though it is figured that such an expenditure can be made in the case of the office and so made as to carry with it a maximum of advertising value.

Determined by the Character of Trade

If you are operating in a new territory, one which is just being settled, it is likely that the volume of business offered you will be large. It will likely be so large that you will feel justified in picking and choosing it very carefully and passing on to your competitor a considerable portion which you do not consider gilt edge. Your sales are easily made. No salesmanship is required on your part. Your customers are not much concerned with the size of your plant or its appearance. They are too busily engaged in putting a roof over their own heads to stop to wonder at the fact that yours is not of the latest design; that it may even be leaking. They are not so much concerned with the fact that the floor in your 12 x 16 shack which you are using as an office needs oiling as they are with the fact that the cars you have on the road may not contain any of that particular kind of flooring which they wish to use for the floors of their shacks. They consider themselves fortunate in being able to purchase lumber and building material at all.

In a case of this kind, there is little or no demand for such an item as a veneered panel, and consequently no need for stocking and displaying it. Your shack-office answers all your requirements very nicely. As for the matter of your stock, it is very largely composed of rough and common lumber which suffers very little from exposure to the elements for a reasonable length of time, if it is properly piled. The large percentage of this class of material is occasioned by the newness of the territory and the fact that the dwellings being erected are of a comparatively primitive nature. Due to the heavy demand for material, your stock is turning rapidly and so it is not exposed to the elements for any considerable length of time. Thus, from the standpoint of depreciation on stock, the simplest possible arrangements in the way of shed space are sufficient.

Do Not Tie Up Too Much Capital

The fact that you are located in a new territory renders the future of your yard more or less problematical. You may decide after operating for a time that credit conditions in your particular territory are not what you thought they were and that consequently you would be better off in business at some other point. In that case, the less money you have invested the easier for you to pull up stakes and move. Or, if you are trading or selling, the less you have invested the better off you will be.

Then again, there is the matter of size of territory. The fact that your territory is new means that you are subjected to the danger of neighboring lines of railroad being built or extended into your territory. Should this happen, the establishment of towns on the new lines would mean a reduction in the size of your territory with a consequent falling off in the volume of business available. This may affect you to such an extent as to render your yard non-profit-making. In this case, to sell or trade it will prove next to impossible because of the fact that your competitors and other prospectives are, like yourself, aware of the true conditions obtaining at your point. Here again, the less you have invested, the greater the likelihood of your being able to liquidate without taking too great a loss upon your investment.

If, however, your yard weathers the storm; if you find credit conditions are all that you expected them to be, and if you have operated at your point long enough to become satisfied that there is little likelihood of a reduction in the size of your territory for some time to come, then it is time you looked about and took stock of how things are going. It is possible that your competitors have been operating along the same general lines as yourself. They may be still doing business from their shacks and making no move toward the erection of more pretentious quarters. If they continue in this way and the needs of your community have not altered to a point where the carrying of a heavy stock of uppers is necessary, then there need be no particular hurry about your tying up much of your capital in building and improvements. A little remodeling of your initial plant and a small addition to your shed perhaps may prove sufficient to your needs for some time to come.

If your competitors have been doing business from modern, up-to-date plants for some time, it will not be advisable for you to put

NOW that the price of Black Tea has soared to a very dizzy height, how would you like to try a blend that we are putting out at a very moderate price, and as a good drinker? Or, perhaps you might be inclined to go back to Japans, which were almost exclusively used in the camps of a quarter of a century ago, and which are very serviceable and at a much lower price than blacks are at present.

Send for Samples.

Chests Camp Blend Black - - .26
Half Chests Japan - - - .17½

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Wholesale Grocers

Church Street and Esplanade, Toronto

Install a KRAFT SODA MILL

CANADA has another big war opportunity: Great Britain needs more wood pulp. Install a small Soda Pulp Plant and Supply this need by converting your Slats, Tops, Bottoms and waste wood around the Saw Mill into pulp. We can dispose of any amount. Previous sources of supply in Sweden, etc., have recently been withdrawn and Canada now has a free field in Great Britain to market unlimited quantities of wood pulp. We can arrange contracts for long periods.
The cost of installing plant is small and you make a sure profit from waste material.

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RIORDAN PULP AND PAPER CO., Montreal. Easy Bleaching Canadian Sulphite Pulp.
ST. LAWRENCE SULPHITE PULP COMPANY.

off for too long the erection of a similar plant. To do so will create in the minds of the public the idea that you are only in business at their point for the purpose of taking out all the money possible from the community and putting back just as little as possible. They will begin to feel that you may perhaps be figuring upon making a move when once you have taken the cream of the business. In short, you will find this idea gradually spreading throughout the community and slowly undermining your business standing. With this will come a falling off of business and a consequent lessening of profit. To delay matters too long in a case of this sort may prove short-sighted policy.

Convey the Idea of Permanence

If you are located in an old territory, one where the volume of business has touched bedrock, where the community has been built up to a point where large and commodious dwellings are the rule rather than the exception, you will find a more or less elaborate plant very much of a necessity. You will find your customers much more critical of yourself, your methods and the apparent condition of the stock you are selling them. You will find the amount of money you have tied up in your higher grades of lumber rather large. Consequently you cannot afford to overlook entirely the matter of depreciation upon the stock as its amount will perhaps exceed interest and depreciation charges against an addition to your shed.

In this case, your volume of lumber sales having reached bedrock, and there being little or no probability of their materially increasing, you have been forced to take on the handling of more and more side lines each year in order to bring your total volume of business up to a point where your venture will show an adequate profit. These side lines in many cases represent rather heavy investments, and are of such a nature as to require shedding or warehousing. This fact helps to make the erection of a more elaborate plant advisable.

At a point of this nature you have settled down to a permanent basis of doing business. You are there to stay. Your competitors and neighbors are daily adopting more advanced methods of merchandising. They are overlooking no opportunity to place themselves and their business prominently before the public eye. And it is likely that they are falling more and more into the habit of making a show place of their business stand. This makes it highly advisable for you to do likewise, and the fact that your point has a good future assured for years to come and consequently places you in a position where you reduce your annual depreciation charge against your plant account by spreading it over a longer term of years, renders it almost obligatory upon you to erect a more pretentious plant.—I. B. Hanks, in the Mississippi Valley Lumberman.

Narrow Bands Need Careful Attention

Especially at this time, when narrow band-saws will be used to an unprecedented extent in shipbuilding and allied industries, a reminder that they should receive as careful attention as any other saw is doubtless appropriate. So much more satisfactory results and such economy are effected by proper care that a consideration of some of the more common forms of abuse will be worth while.

Many a perfectly good saw has been ruined by defective or incorrectly adjusted guides or thrust bearing. Friction case hardens the back edge of the saw and results in breakage there which probably would have been avoided by a few minutes' attention to the guides and bearing.

Another fertile source of difficulty is the use of very sharp-cornered files in fitting. This, of course, makes a sharp angle in the gullet, which has a tendency to weaken the saw. Only on extremely narrow saws with fine teeth is it necessary to use a very sharp-cornered file. On saws of ¼-inch or more spacing, however, a round edge blunt band-saw file should be used. If this practice is adhered to and the saws kept well set and sharpened the greatest single cause of breakage will be eliminated.

In many instances operators do excellent work in setting and sharpening, but make the error of attempting to run too long with one fitting. The saw cannot be produced which will be proof against breakage when run with dull edges. It is just as important to keep these saws really sharp as it is any other saws in the mill. The reason some operators run dull saws is doubtless to save time and trouble in fitting, but it is so much easier to sharpen two half dull saws than one which is excessively dull that labor is actually saved by changing frequently.

Of course, these points are recognized by every seasoned mill man, but it is such an easy matter to overlook them or to slight them for seemingly more important work that printing them here may obviate a deal of trouble.—Disston Crucible.

Col. J. B. White, of the Canadian Forestry Corps, has been gazetted deputy director of forestry, and Lieut.-Col. J. B. Donnelly has been gazetted assistant director of forestry.

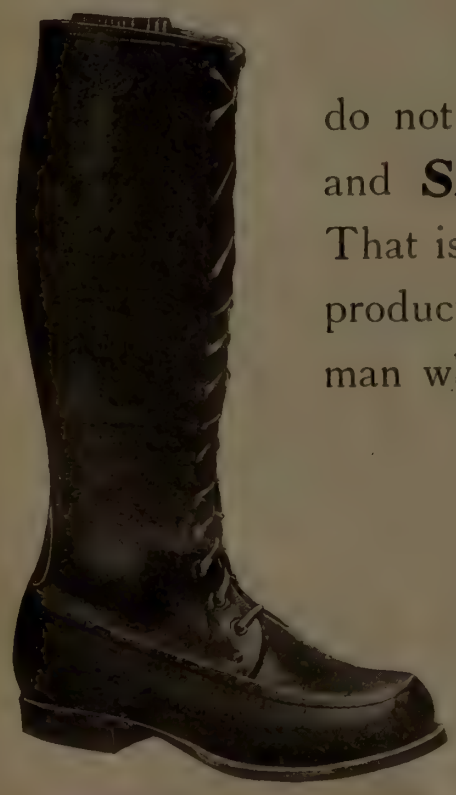
THE P.T. GENDRON SHOE PACK CO. MIDLAND MIDLAND ONT. CAN.

Mr. Lumberman!

When buying your

SHOE PACKS

do not forget that we place ***QUALITY*** and ***SERVICE*** before everything else. That is one of the reasons our product is demanded by the man who wears them.



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***Head Office*: HULL, England**

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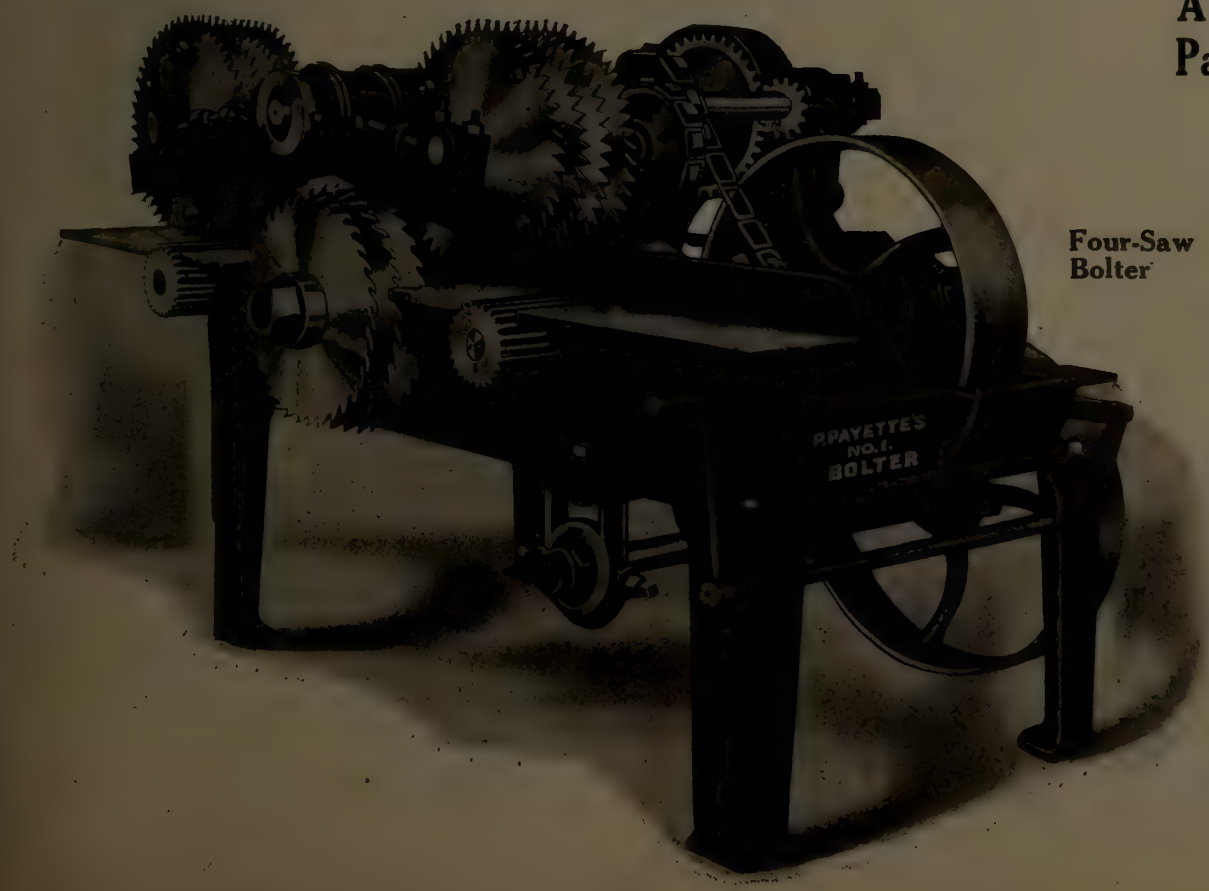
You have the Goods. Place your Lists with full particulars in our hands. We are in daily touch with all the Buyers in the United Kingdom.

PLEASE NOTE.—We pay cash against all documents, and take the whole of the Delcredere risk on Buyers.

128,350 Laths in Ten Hours

Our Lath-Mill and Bolter have made a test cut in ten hours of 128,350 four foot laths, 1½ in. by ⅜ in., counted, tied and piled.



Four-Saw Bolter

A Few of the "400" who use Payette's Lath-Machinery:

Graves, Bigwood Co., Byng Inlet, Ont.
Victoria Harbor Lumber Co., Victoria Harbor, Ont.
Georgian Bay Lumber Co., Waubaushene, Ont.
Colonial Lumber Co., Pembroke, Ont.
Theo. A. Burrows, Grand View, Man.
Wm. Milne & Sons, North Bay, Ont.
C. Beck Mfg. Co., Penetanguishene, Ont.
Manley Chew, Esq., Midland, Ont.
Chew Bros., Midland, Ont.
James Playfair Co., Midland, Ont.
McFadden & Malloy, Spragge, Ont.
Pembroke Lumber Co., Pembroke, Ont.
Petawawa Lumber Co., Ltd., Pembroke, Ont.
Firstbrook Box Co., Penetang, Ont.
Gres Falls Lumber Co., Three Rivers, Que.
Foley Bros. & Northern Coast Co., Scot, Ont.
Spanish Mills Lumber Co., Ltd., Cutler, Ont.
Spanish Mills Lumber Co., Spanish Station, Ont.

P. Payette Co.

Engineers and Machinists,

PENETANGUISHENE, ONT., CAN.

J. T. Payette, Prop.

Will Lumber Employees be Exempt?

Western Manufacturers Believe Output Threatened If Staffs Are Depleted for Overseas Service

(From a Western Correspondent)

Lumbermen of the Mountain district are awaiting with interest some information concerning the industries which are to be exempt from the conscription of their employees. They point out that, while the public generally may not realize it, the lumber industry in the Mountain district of British Columbia is almost entirely a war industry—that is to say, it is engaged in supplying material without which other war industries, such as mining, agriculture, shipbuilding, and munitions-making, could not be carried on. Last year's figures, showing the destination of lumber shipments from the Mountain section, are quoted in this connection. Ninety per cent. of the output went to the Prairie Provinces; 7 per cent. was sold locally; 1 per cent. went to Eastern Canada; 2 per cent. was exported to the United States. Lumbermen say that the export business to the United States might possibly be excluded from the list of war business shipments, but that practically the whole of the balance of 98 per cent. of the shipments were used in industries absolutely essential to the successful conduct of the war.

Take the shipments to the Prairie Provinces. For several years there has been virtually no building of residences in the cities. The lumber sent to the Northwest has been utilized almost wholly in the rural districts, where it has been consumed by the farmer in the pursuit of his business of producing foodstuffs for Canada and the entente nations. The destinations of shipments prove this. Practically every shipment that is being sent out is for rural consumption. The exceptions are in cases such as shipments to Medicine Hat and other points where shell boxes are being manufactured. Farmers have never been accused of using more lumber than is required for the most economical conduct of their business. Farm experts have repeatedly said that if the farmers would build more barns to house their machinery, more granaries to hold their grain, and better accommodation for their stock, the condition of the agricultural industry would be greatly improved. For this reason the lumbermen point out that it is fair to assume that the amount of lumber which the farmers are using is absolutely necessary to the efficient production of the foodstuffs for which all the entente nations are crying out.

At the present time lumber production—which this year will be about equal in the Mountain district to that of 1916, providing that sufficient labor can be attained for the camps and mills—is not large enough to enable the mills to pile up any real surplus in their yards. Hence, unless men engaged in the industry are exempt the danger is feared that production would soon be so reduced as to cause a shortage in the material the farmers need. The same condition applies with regard to the lumber which is supplied by Mountain mills to the mining industry. Metals are one of war's first essentials. Mining cannot continue without timber; railways also need timber, and railways are an essential industry. Practically all the local consumption of lumber, which last year represented 7 per cent. as far as the Mountain district was concerned, went to the railways and mines. Lumber for shipbuilding comes chiefly from the Coast, but Mountain lumbermen make the point that the necessity for the production of material for this purpose is just as great as in the case of farming, mining, munitions works, and transportation. Whether the 1917 output of lumber from the Mountain district will equal that of 1916 is almost entirely dependent upon the labor situation. If the supply of labor becomes any less than at the present time a lessening of production is inevitable, which would mean that essential war industries would suffer.

Another point in connection with the value of the lumber industry at this critical time is the amount of revenue which it produces for the provincial coffers. In British Columbia, if there were no lumber revenue for the province to fall back upon, provincial finances would indeed be in a parlous state. The industry is doing splendid work in the direction of supporting patriotic funds, the Mountain lumbermen making a monthly donation to the Canadian Patriotic Fund a condition of employment.

Lumbermen in the Mountain section are in favor of conscription, and they make it clear that in declaring for exemption they refer only to men actually engaged in and necessary to the prosecution of the lumber industry. Men who can be of more service to the Empire at the front should go there, they say, but the lumber industry should be placed by exemption tribunals upon the same basis as mining, agriculture, and transportation.

Mills operating in 1916 are operating to-day, as a general rule. There is some fear of floods, which may cause damage and shutdowns at some points in the district, but generally the output for the year is dependent upon the ability of the lumbermen to secure enough labor. At present the labor situation is fair, but there is no surplus.

Says the camp cook:

A man can't help makin' good pie when he uses

Bowes TRADE MARK

PIE STOCK

Here is a list of pie-fillings the prices on which should compel your immediate attention:

Evaporated Apples. (Put up in 50-lb. boxes). 13½c. lb.

Evaporated Red Raspberries. (25-lb. boxes). 55c. lb.

Canned Apples. (In No. 10 Tins—6 to a case). $3.85 doz.

Peeled and Pitted Pie Peaches. (Absolutely Solid Pack. No juice. (In No. 10 Tins—6 to a case). $7.50 doz.

Blueberries, Loggie's Eagle Brand. (In No. 10 Tins—6 to a case). $8.00 doz.

Black Currants. (In No. 10 Tins—6 to a case. Containing no liquid but the natural juice). $10.00 doz.

Logan Berries. (In No. 10 Tins, solid pack—6 to a case). $7.50 doz.

Rhubarb. (In No. 10 Tins—6 to a case). $3.00 doz.

Rhubarb (Preserved). In No. 2 Tins—2 doz to case. $1.35 doz.

Pumpkin. (In No. 2½ Tins—2 dozen to a case). $2.25 doz.

Seeded Raisins—Sun Maid Brand. (In 25-lb. boxes). 10½c. lb.

Canned Plums. (In No. 10 Tins, 6 to a case). $3.25 doz.

Seeded Raisins—Feherzagos Brand. (In 25-lb. boxes). 9½c. lb.

Ask us about our various other lines of camp supplies.

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TRADE MARK

The New Waterproofed Duck, Lasts Indefinitely

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Tarpaulins, Feed Bags, Water Buckets

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Boiler Room of Dryden Timber & Power Co., Dryden, Ont., containing six 78 in. x 20 ft. Jenckes Tubular Boilers.

Enquiries addressed to our nearest sales office will receive prompt attention.

for prompt shipment subject to prior sale.

72 x 18	H. R. T.	Boiler	150 lbs. Ont.
60 x 16	"	"	135 " "
60 x 14	"	"	125 " "
2—60 H.P.	Loco.	Type	125 " "
2—50 H.P.	"	"	140 " "
2—50 H.P.	"	"	125 " "
2—50 H.P.	"	"	120 " Alta.
3—30 H.P.	Vertical	"	100 " Ont.
6—25 H.P.	"	"	100 " "
8—20 H.P.	"	"	100 " "
4—15 H.P.	"	"	100 " "
3—12 H.P.	"	"	100 " "

The Jenckes Machine Co., Limited

SHERBROOKE — MONTREAL 908 E.T. Bank Bldg. — COBALT — TORONTO 710 C.P.R. Bldg. — ST. CATHARINES — VANCOUVER 616 Standard Bank Bldg.

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EDGINGS

Ontario

The Ontario Woodworking Company, Limited, have been incorporated with head office at Kitchener, Ont., and capital stock of $50,000, to carry on business as manufacturers and dealers in wood, metal and paper. The provisional directors are:—D. B. Betzner, E. B. Betzner and O. Hamilton.

The Imperial Munition Board have let contracts for two wooden ships to be built in Ashbridge's Bay, Toronto, by the Russell Contracting Company and John J. Main, of the C. S. Boone Company. The steamers will be constructed of British Columbia fir. The temporary office of the Russell Contracting Company is at 32 Front Street West. When the shipbuilding yard on Ashbridge's Bay has been established the office will be moved thither.

The Mattagami Pulp and Paper Company have nearly completed the 150-ton sulphite plant which they are erecting at Smooth Rock Falls, Ont. It will be in operation in a very short time. Mr. S. R. Armstrong is general manager, and Mr. Jos. G. Mayo, formerly with the company, has again joined it as assistant to Mr. Armstrong.

In the railway committee of the House of Commons recently the senate bill to incorporate the Kenora and English River Railway Company was reported. The company proposes to build a railway from Dryden, near Kenora, to a point on the N. T. R., west of Superior Junction, thence northwesterly across the English River west of Lac Seul. Alex. Smith, counsel for the company, said that the purpose of the railway is to develop a large pulp wood industry. Incidentally there would be some agricultural and mining development. The authorized capital is two million dollars and the head office at Toronto.

The Colonial Lumber Company, Limited, Pembroke, Ont., whose plant was recently destroyed by fire advise us that their loss was well covered by insurance, which was carried to the amount of $76,000. The mill had been running about four weeks and had cut about 3,500,000 feet at the time of the fire. Arrangements have been made with the Pembroke Lumber Company to cut at least 10,000,000 feet for the Colonial Lumber Company this season. Between 3,000,000 feet and 4,000,000 feet of logs are being delivered at R. & T. Ritchie's mill, Aylmer, P.Q., where most of them will be cut this year. The company also report that they hope to be able to rebuild, but whether they will make a start this year or not, has not yet been decided upon. They find great difficulty in purchasing machinery under present conditions, and report that the prices asked are extremely high. The labor problem, moreover, is also making it difficult to work out plans for rebuilding.

The Great Lakes Pulp and Paper Company is being organized, with headquarters at Port Arthur, Ont. The company will erect a 200-ton newsprint mill and will have chemical and mechanical pulp plants capable of producing 350 tons daily. They will have an authorized bond issue of $6,000,000, and at present $4,000,000 will be issued. The common stock will be $12,000,000. This is the company controlling the Pic River and Black Sturgeon River concessions in the Thunder Bay districts. The total area is about 2,400 square miles. The company have contracted with the Hydro Electric System for 20,000 h.p. at $15 per h.p. Among those interested are J. J. Carrick, M.P., Port Arthur; Lieut. Col. Hogarth, Port Arthur; E. B. Ryckman, of Ryckman, Denison & Foster, Toronto; Bermingham & Seaman, of New York and Chicago and others. Bermingham & Seaman will manage the mills and sell the output. The site of the new industry will be on Thunder Bay, just east of Port Arthur, on land owned by J. J. Carrick, consisting of 4,400 acres, of which 800 are water lots. Hardy S. Ferguson, of New York, is the engineer of the company. The Pic River limits are 138 miles from Port Arthur and the Black Sturgeon limits are 75 miles. It is estimated that, on the limits, there are 3,000,000 cords of spruce wood and 2,300,000 cords of balsam and poplar.

Eastern Canada

Fraser Companies, Limited, lumbermen, Plaster Rock, N.B., have obtained a charter.

Dupuy and Frere, lumber dealers, St. Lambert, P.Q., have been registered. Louis and F. X. Dupuy are interested.

The Rhodes Curry Company, Limited, Amherst, N.S., are in the market for a large quantity of one inch hardwood lumber.

The Three Rivers Ship Yard Company (Messrs. Kirkwood & Son) are contemplating the location of a plant at Three Rivers, P.Q.

Fire recently destroyed the mill at Goggin's Siding, N.B., belonging to S. H. White Company, Limited. The loss is partly covered by insurance.

Thos. Nagle, lumber broker, St. John, N.B., reports that he is forming a company to engage in the construction of wooden vessels at St. John, N.B.

The Halifax Shipbuilding Company, Limited, has been incorporated with capital stock of $3,000,000, and head office at Halifax, N.S. The company will

build ships, erect docks, wharves, dry docks, etc. The solocitor for the company is J. B. Kenny.

D. A. Saker, formerly connected with the Imperial Munitions Board, is considering plans for establishing a shipbuilding yard on the site of the Warner Sawmill property at St. John, N.B.

A storage shed, 60 x 180, belonging to William Rutherford & Sons Company, Limited, Montreal, was destroyed by fire on June 29. The building contained a large number of doors and sash, and a quantity of interior trim, together with unfinished stock. The damage is estimated at $25,000, covered by insurance.

Grant and Horne, St. John, N.B., have obtained a contract from the Imperial Munitions Board for the construction of two vessels, and it is expected that this will be followed by other orders. The vessels will be similar to those described a short time ago in the Canada Lumberman. The company are establishing a shipbuilding yard at the head of Courtenay Bay.

Western Canada

The Standard Woodworking Company, Limited, Winnipeg, Man., has been incorporated.

The Fullerton Fawcett Lumber Company, Battle Lake, Alta., have decided to rebuild their mill. Address communications to W. B. Fullerton.

The Pacific Construction Company will build a large planing mill at Port Coquitlam, B.C. The mill and yards will be equipped with the most up-to-date machinery, electric cranes, booms, etc.

Lumber Products Limited has been incorporated with head office at Vancouver, B.C., and capital stock of $45,000, to carry on business as timber merchants, sawmill proprietors, lumbermen and shingle manufacturers.

The Undine Logging Company, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $10,000, to carry on business as manufacturers and dealers in timber, lumber, shingles, lath, sash and doors, etc.

The Grand Forks Lumber Company, Limited, has been incorporated with head office at Grand Forks, B.C., and capital stock of $50,000, to carry on business as lumber manufacturers; to construct, build and operate sawmills, shingle mills, sash, door and box factories, etc.

The A. A. Plummer Company, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $25,000, to carry on business as foresters, timber merchants, sawmill proprietors, etc., and to deal in saw logs, timber, lumber, shingles and wood of all kinds.

The Smith-Hutchinson Lumber Company, Limited, has been incorporated with head office at Victoria, B.C., and capital stock of $15,000, to carry on business as loggers, lumbermen, sawmill men and timber manufacturers; to export and deal in lumber, timber, shingles, railroad ties, piling, pulpwood, etc.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 23rd day of July, 1917, for the purchase of License X989, to cut 2,031,000 feet of fir, cedar and hemlock on an area adjoining S. T. L. 30613, Butterfly Bay, Mayne Passage, Range 1, Coast District. Two years will be allowed for the removal of the timber.

The Ruby Lake Timber Company, Limited, has been incorporated with head office at Victoria, B.C., and capital stock of $10,000, to carry on business as sawmill owners, timber and lumber merchants, and manufacturers of and dealers in lumber, timber, lath, shingles, sash and doors, etc., and to build sawmills, pulp mills, logging railways, logging camps, etc.

The North Coast Spruce Mills Limited, have been incorporated with head office at Vancouver, B.C., and capital stock of $48,000, to carry on business as manufacturers and dealers in wood pulp; to erect and operate shingle mills, sawmills, planing mills, wood pulp mills and wood factories of all kinds and to carry on the business of foresters, loggers, timber and lumber merchants, etc.

The New Westminster Construction and Engineering Company, Limited, has been incorporated with head office at New Westminster, B.C., and capital stock of $30,000, to carry on the business, among other things, of woodworkers, timber merchants, lumbermen, loggers, sawmill, shingle mill, pulp mill, and paper mill proprietors, and as manufacturers of and dealers in saw logs, timber, lumber, shingle bolts, piles, wood and paper of all kinds.

The loss by fire at the planing mill and box factory of the Cameron Lumber Company, Limited, Victoria, B.C., recently, amounted to approximately $80,000, of which $25,000 will be recovered in insurance. The loss included about 20 carloads of box shooks which were waiting for shipment. The company advise us that they will rebuild immediately. They have commenced to clear away the space and have received drawings for the new building. Some of the machinery is already on the way.

A Vancouver despatch states that the Red Cliff Land & Timber Company is asking for foreclosure against 21,000 acres of timber land in the Alberni district, sold to Alvo von Alvensleben in 1911, the payment extending over ten years. The cash payment was $230,000 on a total of $2,228,700, and subsequent payments were made to an aggregate of about $1,700,000. The plaintiffs are now suing for $525,723, being the total amount now owing. Some time ago this action came up and an extension of time was granted in view of the fact that other interests had liens, etc., against the property.

We have for sale the following

DRY SPRUCE

1 x 4 in. 10/16 ft. merchantable	394 M
1 x 5 in. 10/16 ft. merchantable	250 M
1 x 6 in. 10/16 ft. merchantable	31 M
1 x 6 in. 10/16 ft. merchantable	29 M
1 x 10 in. and 11 in. 10/16 ft. merchantable	16 M
1¼ x 8 in. 10/16 ft. merchantable	46 M
1¼ x 9 in. 10/16 ft. merchantable	13 M
1¼ x 10 in. and 11 in 10/16 ft. merchantable.	7 M
2 x 4 in. and up 10/16 merchantable	100 M
3 x 6 in. 10/16 merchantable	200 M
2 scant. x 4 in. 10/16 merchantable	73 M
2 scant. x 5 in. 10/16 merchantable	190 M
2 scant. x 6 in. 10/16 ft. merchantable	245 M
2 scant. x 7 in. 10/16 merchantable	117 M
2 scant. x 8 in. 10/16 ft. merchantable	95 M
1 x 5 in. and up 10/16 ft. cull	480 M
2 x 4 in. and up 10/16 ft. cull	53 M
2 scant. x 4 in. and up 10/16 ft. cull	75 M
3 x 4/8 in. 10/16 ft. cull	250 M
3 x 9 in. and up 10/16 ft. cull	500 M

If interested, would be pleased to quote lowest prices, which are subject to stock being on hand on receipt of enquiry.

The McLennan Lumber Co.
LIMITED
Wholesale and Retail
21 Dorchester Street W. - MONTREAL, QUE.
Telephone Main 8656. Private exchange to all departments

H. BOURGOUIN
Dominion Express Bldg., 145 St. James St., Montreal
WHOLESALE LUMBER AND TIMBER
Dressed and Rough
White and Red Pine, Spruce, Hemlock, Banksian Pine, Birch, Maple, Dimension Cedar, B. C. Fir, Yellow Pine, Railway Ties, Fence Posts, etc.
Prompt shipment. Satisfactory stock. Good service Write for Prices.
A. F. B. AUSTIN, Manager

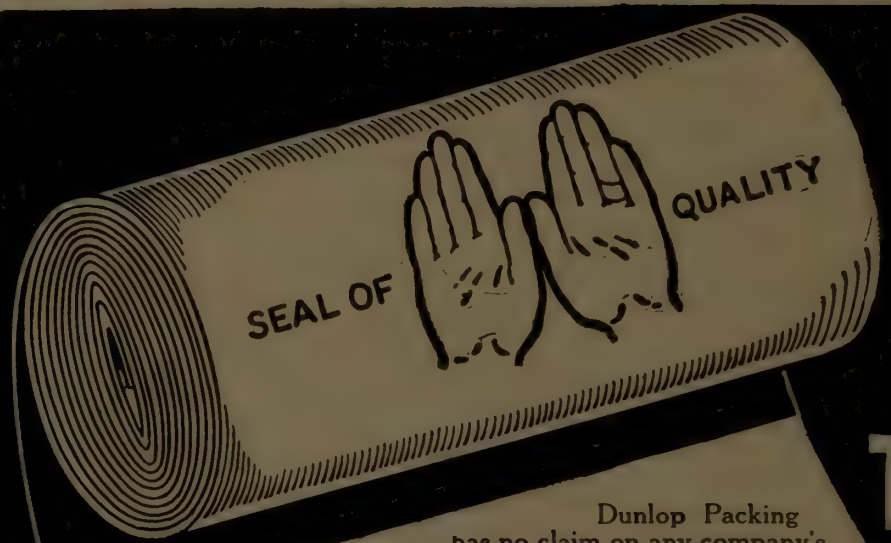
Your Blower System

If you contemplate installation of a new blower system or an extension of your present one, write us, as we have a unique proposition to offer. There is no heating, clogging or shaking with our system.

Prices on application

The Toronto Blower Co.
156 Duke St., Toronto

DUNLOP



PACKING

PICTURE THIS PACKING IN YOUR PLACE

Dunlop Packing has no claim on any company's enthusiasm except by reason of its ability to do the work assigned to it, and to be there in the "pinches."

Ever-Increasing Demand

Every day Engineers and Mechanical Superintendents are realizing that the remarkable increase in the demand for Dunlop Packing is accountable for in only one way—by consistent service, persistently kept up.

Dunlop **"Sunset"** Sheet Packing (red) has that desirable flexibility which ensures the necessary "life" in a packing. Its remarkable tenacity holds in the hottest joints.

"LongLife" and "Globe" Spiral Excel in Service

Dunlop **"LongLife"** and **"Globe"** Spiral Piston Rod Packings take quality precedence over competitive brands, because we make them, like **"Sunset"** Sheet, to a standard—and that standard was created by critical buyers like yourself. Wherever these packings are used, Engineers are complimented on the continued efficiency of their plants. No blowouts, no frequent adjusting, no loss of power due to friction—when Dunlop **"LongLife"** and **"Globe"** Spiral Packings are used.

We, also, make Valves and Diaphragms of excellent quality.

PROOF OF SERVICE IN COUNTLESS CANADIAN PLANTS

Dunlop Tire & Rubber Goods Co., Limited

Head Office and Factories:
Toronto

Q. 18

The British Paper Markets are Your Opportunity

Establish a market for your paper stock now and it will be a great asset to you in after war trade with Great Britain. We can make very advantageous contracts for Canadian paper of all kinds and especially newspaper stock. This is a big opportunity for Canadian mill men. We are the largest paper makers' agents in Great Britain and will be glad to hear from manufacturers interested in export trade.

Write us to-day.

W. V. BOWATER & SONS, LIMITED

Paper Makers, Wholesale and Export Stationers, Etc.

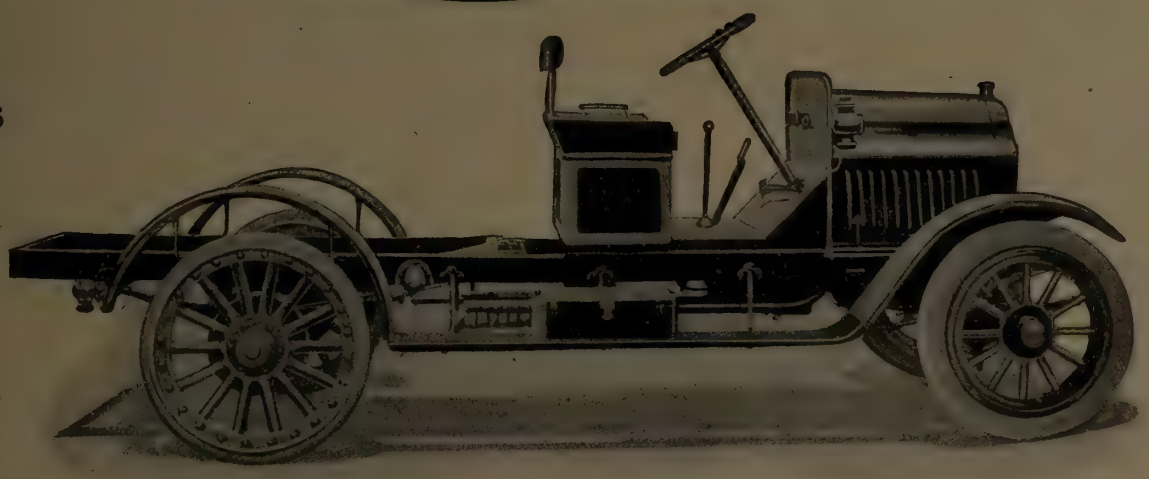
159 QUEEN VICTORIA STREET, LONDON, E.C., ENGLAND

Please address all communications to Woolworth Building, Broadway, New York, U.S.A.

The "Little Giant" Truck

Special Features

Timken Worm Drive
Continental Motor
Schebler Carburetor
Ross Irreversible Steering Gear
Eisemann High Tension Magneto



Standard Models

"H 4"—1½ tons Chain Drive
"15"—1 ton Worm Drive
"16"—2 tons Worm Drive
"17"—3½ tons Worm Drive
"18"—5 tons Worm or Chain Drive to order

Model 15—1 Ton

THE LITTLE GIANT MOTOR TRUCK enables the retail lumber dealer to give his customers the very best of service, which is the big outstanding argument that interests the busy contractor. Other things being equal, the lumber dealer who can give the best service gets the most business.

The DUNTLEY Hydro-Pneumatic Gas Generator

THE DUNTLEY Hydro-Pneumatic Gas Generator is an exclusive feature of Little Giant Motor Trucks. With this device the Little Giant Truck may be operated on a mixture of one-half kerosene and one-half gasoline, at a saving in fuel cost of over 50 per cent., with a total absence of carbon, smoke or odor.

SELLING AGENTS

Canadian Pneumatic Tool Co., Limited

GEORGE J. SHEPPARD, Vice-President and Manager

BRANCH: VANCOUVER
1073 Hamilton Street

MONTREAL
379 Craig Street West

BRANCH: TORONTO
107 Church Street

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1-inch No. 1 cuts and better.	$50 00	52 00
1½ inch No. 1 cuts and better.	60 00	62 00
2-in. No. 1 cuts and better	62 00	64 00
1½-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	52 00	54 00
4/4 No. 2 and 3 cuts		33 00
5/4 and 6/4 No. 2 and 3 cuts	38 00	40 00
8/4 No. 2 and 3 cuts	40 00	42 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	35 00	36 00
1 x 6 common and dressing ...	37 00	39 00
1 x 8 common and dressing ...	38 00	40 00
1 x 10 common and dressing ..	40 00	42 00
1 x 12 common and dressing ..	43 00	45 00
1 x 10 and 12 mill cull stocks	30 00	31 00
1-in. mill cull sidings	27 00	28 00
5/4 and 6/4 x 4 m.r., m.c. out.	35 00	36 00
5/4 and 6/4 x 5 m.r., m.c. out.	35 00	36 00
5/4 and 6/4 x 6 m.r., m.c. out	35 00	36 00
5/4 and 6/4 x 8 m.r., m.c. out.	36 00	37 00
5/4 and 6/4 x 10 m.r., m.c. out	42 00	43 00
5/4 and 6/4 x 12 m.r., m.c. out.	44 00	45 00
2 x 10 common	36 00	38 00
2 and 3 x 12 common	39 00	40 00
1 x 8 box and common		33 00
1 x 10 inch box and common.		35 00
1 x 12 inch box and common.		35 00
1-in. mill run sidings		35 00
1-in. mill run shorts		28 00
1-in. mill run Norway		30 00
2-in. mill run Norway	33 00	35 00
Norway, c. and cf. 1-in.	38 00	40 00
Norway, c. and cf. 1½-in. ...	39 00	41 00
Norway, c. and cf. 2-in.	39 00	41 00
Spruce mill run 1-in. and 2-in.	31 00	32 00
Spruce mill culls	26 00	27 00

Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ..		23 00
1 x 6-in. x 9 to 16 ft.		27 00
1 x 8-in. x 9 to 16 ft.		28 00
1 x 10 and 12 in. x 9 to 16 ft.		29 00
1 x 7, 9 and 11 in. x 9 to 16 ft. .		26 00
1-in. No. 2, 6-ft. to 16-ft.		20 00
2 x 4 to 12, 10 and 16 ft.		27 00
2 x 4 to 12 in., 12 and 14 ft...		27 00
2 x 4 to 12-in., 18 ft.		30 00
2 x 4 to 12-in., 20 ft.		32 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		22 00
Clear in. B.C. cedar, kiln dried	50 00	55 00

Douglas Fir:	
Dimension Timber up to 32 feet:	
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	40 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16	41 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.	41 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.	42 00
10x20, 18x20, up to 32 ft.	42 50
6x18, 8x18, up to 32 ft.	42 50
6x20, 8x20, up to 32 ft.	42 00
Timber in lengths over 32 feet subject to negotiation.	
Fir flooring, 1 x 3, edge grain..	43 50
Fir flooring, 1 x 4, edge grain..	46 50
Fir flooring, 1 x 4, flat grain..	39 50
No. 1 and 2, 1-in. clear Fir rough	50 75
No. 1 and 2, 1¼ and 1½ in., clear Fir rough	56 00
No. 1 and 2, 2-in. clear Fir rough	52 00
1½-in. No. 1, 4-ft. pine lath.	6 00
1½-in. No. 2 4-ft. lath	5 70
1½-in. 32-in. pine	2 75
1½-in. No. 1 4-ft. hemlock lath.	4 50
1½-in. mill run hemlock lath.	4 25
XX B. C. cedar shingles	3 35
XXX 6 butts to 2-in.	4 45
XXXXX	4 95

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	$65 00	71 00
Ash, white, No. 1 common....		45 00
Ash, brown, 1sts and 2nds, 4/4		57 00
Ash, brown, com. and bet. ...		45 00
Ash, brown, 1sts and 2nds, 6/4 and 8/4		65 00
Birch, 1st and 2nds, 4/4		55 00
Birch, No. 1 com. and bet., 4/4		47 00
Birch, 1st and 2nds, 6/4 and 8/4		65 00
Birch, 1st & 2nds, 10/4 and 12/4		78 00
Birch, 1st and 2nds, 16/4		85 00
Basswood, 1sts and 2nds, 4/4 ...		53 00
Basswood, No. 1 com. and bet., 4/4	45 00	47 00
Basswood, No. 2 and 3 common		28 00
Basswood, 6/4 and 8/4, 1sts and 2nds	58 00	60 00
Basswood, 6/4 and 8/4, com. and bet.		48 00
Basswood, 4/4, No. 2 com. and bet.		42 00
Soft elm, 1sts and 2nds, 4/4 ..		48 00
Soft Elm, No. 1 com. and bet., 4/4		43 00
Soft Elm, No. 2 and 3 common		20 00
Soft Elm, 6/4 and 8/4, 1 and 2		60 00
Rock Elm, 1sts and 2nds, 6/4 and 8/4		65 00
Rock Elm, No. 2 com. and bet., 6/4 and 8/4		45 00
Soft Maple, 1sts and 2nds, 4/4..		48 00
Soft Maple, com. and bet., 4/4.		38 00
Soft Maple, 6/4 and 8/4, 1sts and 2nds		55 00
Hard Maple, 1sts and 2nds, 4/4		47 00
Hard Maple, com. and bet., 4/4		42 00
Hard Maple, 12/4, 1sts and 2nds	65 00	70 00
Hard Maple, 16/4, 1sts and 2nds	85 00	90 00
Red Oak, plain, 1sts and 2nds, 4/4		64 50
Red Oak, plain, No. 1 com., 4/4		44 50
Red Oak, plain, No. 2 com., 4/4		33 50
Red Oak, plain, 1sts and 2nds, 6/4 and 8/4		70 00
Red Oak, plain, 1sts and 2nds, 12/4 and 16/4	77 00	85 00
White Oak, plain, 1sts and 2nds, 4/4		
White Oak, plain, No. 1 com., 4/4		44 50
White Oak, plain, No. 2 com., 4/4		33 50
Red and White Oak, plain, 1sts and 2nds, 5/4 and 6/4 .....,	65 00	68 00
Red and White Oak, plain, No. 1 com., 5/4 and 6/4		48 00
Red and White Oak, plain, No. 2 com., 5/4 and 6/4		35 00
Red and White Oak, plain, 1sts and 2nds, 8/4		70 00
Red and White Oak, plain, No. 1 com., 8/4		50 00
White Oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00	85 00
White Oak, ¼ cut, 1sts and 2nds, 4/4		89 00
White Oak, ¼ cut, 5/4 and 664, 1sts and 2nds		92 00
White Oak, ¼ cut, No. 1 com.		57 00
Hickory, 1sts and 2nds, 4/4 ...		64 00
Hickory, 6/4, 1sts and 2nds..		70 00
Hickory, 8/4, 1sts and 2nds ..		75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$55 00	57 00
1¼-in. and 1½-in. x 8-in. & up	70 00	72 00
2-in. x 7-in. and up	72 00	74 00
No. 2 cuts 2 x 8-in. and up...	45 00	48 00
Pine good strips:		
1-in.	45 00	46 00
1¼-in. and 1½-in.	55 00	56 00
2-in.	56 00	57 00
Pine good shorts:		
1-in. x 7-in. and up	45 00	50 00
1-in. x 4-in. to 6-in.	32 00	34 00
1¼-in. and 1½-in.	53 00	55 00
2-in.	54 00	56 00
7-in. to 9-in. A sidings	30 00	32 00
Pine, No. 1 dressing sidings ...	42 00	45 00
Pine, No. 1 dressing strips ...	40 00	42 00
Pine, No. 1 dressing shorts....	34 00	36 00
Pine, 1-in. x 4-in. s.c. strips....		34 00
Pine, 1-in. x 5-in. s.c. strips....		35 00
Pine, 1-in. x 6-in. s.c. strips....		37 00
Pine, 1-in. x 7-in. s.c. strips....		37 00
Pine, 1 x 8-in., s.c., 12 to 16 ft.		38 00
Pine, 1-in. x 10-in. M. R.		40 00
Pine, s.c. sidings, 1½ and 2-in.	30 00	38 00
Pine, s.c. strips 1-in.		33 00
1¼, 1½ and 2-in.	36 00	37 00
Pine, s.c. shorts, 1 x 4 to 6 in.	29 00	30 00
Pine, s.c. and bet., shorts 1 x 5		32 00
Pine, s.c. and bet., shorts, 1 x 6		33 00
Pine, s.c. shorts, 6′-11′, 1″x 10″		36 00
Pine box boards:		
1″x 4″ and up, 6′-11′		24 00
1″x 3″, 12′-16′		24 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	25 00	27 00
Pine, mill cull stock, 1 x 12 ..		32 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.		25 00
O. culls r & w p	18 00	20 00
Red Pine, log run:		
mill culls out, 1-in.	28 00	30 00
mill culls out, 1¼-in.	28 00	30 00
mill culls out, 1½-in.	28 00	30 00
mill culls out, 2-in.	28 00	30 00
mill culls, white pine, 1″x 7″ and up	29 00	30 00
Mill run Spruce:		
1″x 4″ and up, 6′ 11′	24 00	25 00
1″x 4″ and up, 12′-16′		30 00
1″x 9″-10″ and up, 12′-16′		36 00
1¼″x 7″ 8-9″ and up, 12′-16′		35 00
1¼″x 10″ and up, 12′-16′ ...		36 00
1½″ & 2″x12″ and up, 12′-16′		40 00
Spruce, 1-in. clear (fine dressing and B)		37 00
Hemlock, 1-in. cull	18 00	20 00
Hemlock, 1-in. log run	23 00	24 00
Hemlock, 2x4, 6, 8, 10, 12/16′ ..	26 00	28 00
Tamarac	24 00	26 00
Basswood, log run, dead culls out	30 00	40 00
Basswood, log run, mill culls out	26 00	28 00
Birch, log run	30 00	32 00
Soft Elm, common and better, 1, 1½, 2-in.	25 00	30 00
Ash, black, log run	32 00	40 00
1 x 10 No. 1 barn	40 00	45 00
1 x 10 No. 2 barn	38 00	40 00
1 x 8 and 9 No. 2 barn		38 00
Lath per M:		
No. 1 white pine, 1½-in. x 4-ft.	5 50	5 75
No. 2 white pine		5 25
Mill run white pine		5 50
Spruce, mill run 1½-in.		5 00
Red pine, mill run		4 75
Hemlock, mill run		4 00
32-in. lath		2 25
White Cedar Shingles:		
xxxx, 18-in.		5 00
Clear butt, 18-in.		4 00
18-in. xx		2 25
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal.	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	80	85
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Birch Planks		
1 to 4 in.	20 00	25 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.		$74 00
1 in., 8 in. and up wide		83 00
1¼ and 1½ in. and up wide		86 00
2 in. and up wide		88 00
Cuts and Better		
4/4 x 8 and up No. 1 and better		58 00
6/4 x 8 and up No. 1 and better		70 00
8/4 x 8 and up No. 1 and better		72 00
6/4 x 6 and up No. 2 and better		61 00
8/4 x 6 and up No. 2 and better		65 00
6/4 x 6 and up No. 3 and better		56 00
8/4 x 6 and up No. 3 and better		59 00
No. 1 Cuts		
1 in., 8 in. and up wide		50 00
1¼ in., 8 in. and up wide		59 00
1½ in., 8 in. and up wide		61 00
2 in., 8 in. and up wide		64 00
2½ and 3, 8 in. and up wide		84 00
4 in., 8 in. and up wide		90 00
No. 2 Cuts		
1 in., 6 in. and up wide		36 00
1¼ in., 6 in. and up wide		47 00
1½ in., 6 in. and up wide		48 00
2 in., 6 in. and up wide		49 00
2½, 3 and 4 in., 6-in. and up wide ..		68 00
No. 3 Cuts		
1 in., 6-in. and up wide		30 00
1¼ and 1½ in., 6-in. and up wide		35 00
2 in., 6-in. and up wide		36 00
2½, 3 and 4-in., 6-in. and up wide	45 00	48 00
Common and Dressing Mill Run		
1-in. x 4 in.		32 00
1-in. x 5-in.		32 00
1-in. x 6 in.		34 00
1-in. x 8-in.		34 00
1-in. x 10-in.		36 00
1-in. x 12-in.		38 00
1-in. x 13-in. and up		38 00
1¼, 1½ and 2 in.		40 00
No. 1 Barn		
1 inch	38 00	48 00
1¼, 1½ and 2-in.	45 00	51 00
2½ and 3-in.		55 00
4 inch		58 00
No. 2 Barn		
1 inch	35 00	42 00
1¼, 1½ and 2-in.	38 00	44 00
2½ and 3-in.		46 00
No. 3 Barn		
1 inch	32 00	36 00
No. 1, 1, 1¼, 1½, 2-in.		34 00
Box		
No. 1, 1, 1¼, 1½, 2-in.	29 00	31 00
No. 2, 1¼, 1½, 2-in.		26 00
Mill Culls		
Mill run culls, 1-in.		27 00
1, 1¼, 1½ and 2-in.		28 00
No. 2	24 00	26 00
Lath		
No. 1, 32-in. pine		2 00
No. 2, 48-in. pine		5 00
No. 1, 48-in. pine		5 50
No. 3, 48-in. pine		4 50
Hemlock Lath, 48-in..........		4 50

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac.

Dimension. S. 1 S. and 1 E.

	6 ft.	8 ft.	10 ft.	14 & 16 ft.
2 x 4, 6, 8 ..	16 00	19 00	22 50	23 50
2 x 10	20 00	20 50	23 50	24 50
2 x 12	20 00	21 00	25 50	25 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH.

Mountain Stock.

Dimension.

2 x 4, 8, 12, 14, 16	23 50
2 x 4, 10, 18, 20	25 50
2 x 6, 8 to 16	23 50
2 x 8, 8 to 16	23 50
2 x 4-6 and 8 in.; 24, 26, 28, 30, 32 ft.	31 50
2 x 10 and 2 x 12; 8-16 ft.	28 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	30 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	32 50
No. 1 Common Boards.	
4 inch	23 00
6 inch	25 50
8, 10, 12 inch	27 50
Mixed widths	26 50
Flooring.	
4 or 6 inch No. 1	37 00
4 or 6 inch No. 2	32 00
4 or 6 inch No. 3	26 00
Shiplap—Finished.	
6 inch	24 00
8, 10 and 12 inch	25 00
Siding.	
6 inch No. 1	37 00
6 inch No. 2	35 00
6 inch No. 3	27 00
Lath.	
No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50
PINE-ROUGH TIMBER.	
3 x 6 in.; 8 to 16 ft.	29 10
3 x 8 in.; 8 to 16 ft.	26 00
3 x 12, 4 x 4, 6 x 6 in.; 8 16 ft.	29 00
4 x 10 to 10 x 10, 8 x 8, 6x 12 in. up to 32 ft.	31 00

BRITISH COLUMBIA COAST FIR.

Dimension S1S and E.

2 x 4 in.; 6 and 8 ft.	22 50
2 x 4 in.; 12 and 14 ft.	23 50
2 x 4 in.; 10 and 16 ft.	24 50
2 x 4 in.; 18 and 24 ft.	25 50
2 x 4 in.; 22 and 24 ft.	26 50
2 x 4 in.; 26 to 32 ft.	28 50
2 x 10 and 2 x 12 in.; 10 to 16 ft. ...	25 00
2 x 10 and 2 x 12 in.; 18 and 20 ft. ..	27 00
2 x 10 and 2 x 12 in.; 22 and 24 ft. ..	28 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	30 00
2 x 14 in.; 10 to 16 ft.	30 00
2 x 14 in.; 18 and 20 ft.	32 00
2 x 14 in.; 22 and 24 ft.	33 00
2 x 14 in.; 26 to 32 ft.	35 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	26 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	27 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	28 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	29 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	31 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	29 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	30 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	30 50
FLOORING.	
Nos. 1 and 2, 1 x 3 in., E. G.	37 00
Nos 1 and 2, 1 x 4 in., E. G.	40 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in. F. G.	30 00
Nos. 1 and 2, 1 x 6 in., F G.	35 00
No. 3, 1 x 4 in.	28 00
No. 3, 1 x 6 in.	33 00
No. 3 Edge grain $3 per M. extra.	
SHIPLAP.	
B. C. fir, 6 in.	23 50
B. C. fir, 8, 10, 12 in.; 8 to 16 ft.	24 50
No. 2 shiplap, 6 in.	23 50
No. 2 shiplap, 8, 10 and 12 in.	24 50
FIR, COMMON BOARDS, S1S, 8 to 16 Ft.	
Mixed widths (may contain 30 per cent. 4 and 6 in.)	22 00
Common boards, 8 to 12 in.	23 00
No. 2 mixed widths	18 00
No. 2 boards, 8 to 12 in.	19 00
SHINGLES.	
XXX B. C. cedar	3 05
LATH.	
Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's	4 50
Cedar lath, ⅜ x 1⅜ in. x 4 ft.	5 00

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White Pine

Wholesale Selling Price

Uppers, 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00
No. 1 Moulding 8/4	62 00

(Continued on page 56)

Wasted Time Eats Profits

THESE two classes of employees are always gnawing at your profits — "early outs" and "lates" on the pay-roll of any plant. You must account for the minutes you buy just as you account for the dollars and cents that you handle.

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CURRENT LUMBER PRICES—Continued

No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

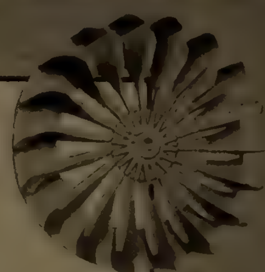
	1s & 2s	No. 1 Com.	No. 2 Com.
MAPLE			
4/4	46 - 48	28 - 30	18 - 20
5/4 to 8/4	58 -60	36 - 38	20 - 24
10/4 to 16/4	68 - 70	48 - 50	28 - 30
RED BIRCH			
4/4	58 - 60	38 - 40	22 - 24
5/4 to 8/4	60 - 62	40 - 42	24 - 26
SAP BIRCH			
4/4	48 - 50	32 - 34	20 - 22
5/4 and up	50 - 52	34 - 36	22 - 24
SOFT ELM			
4/4	40 - 42	28 - 30	20 - 22
5, 6 & 8/4	42 - 44	30 - 32	20 - 22
BASSWOOD			
4/4	44 - 46	34 - 36	22 - 24
Thicker	42 - 44	32 - 34	22 - 24
PLAIN OAK			
4/4	52 - 54	33 - 35	19 - 21
5/4 to 8/4	51 - 53	29 - 31	17 - 19
ASH, WHITE AND BROWN			
4/4	51 - 54	29 - 31	19 - 21
5/4 to 8/4	61 - 64	34 - 36	20 - 22
10/4 and up	74 - 87	46 - 48	22 - 24

BOSTON, MASS.

White pine uppers, 1 to 2 in.		119 00
Selects, 1 to 2 in.	106 00	109 00
Fine common, 1 in.		78 00
Fine common, 1¼ to 2 in.	85 00	87 00
No. 1 Cuts, 1 in.		60 00
No. 1 Cuts, 1¼ to 2 in.	70 00	75 00
No. 2 Cuts, 1 in.		49 00
No. 2 Cuts, 1¼ to 2 in.	60 00	66 00
Barn Boards, No. 1, 1 x 12		60 00
No. 1, 1 x 10		48 00
No. 1, 1 x 8		46 00
No. 2, 1 x 12		50 00
No. 2, 1 x 10		45 00
No. 2, 1 x 8		44 00
No. 3, 1 x 12		43 00
No. 3, 1 x 10		41 00
No. 3, 1 x 8		40 00
Canadian spruce boards		30 00
Spruce, 12 in. dimension		42 00
Spruce, 10 in. dimension		40 00
Spruce, 9 in.		38 00
Spruce, 8 in. under dimen.		36 00
10 and 12 in. random lengths, 8 ft. and up		36 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7		29 00
3 x 4 and 4 x 4 in.	30 00	31 00
2 x 8 in.		33 00
All other random lengths, 7-in. and under, 8 ft. and up	29 00	30 00
5-inch and up merchantable boards, 8 ft. and up, p 1s.		30 00
1 x 2		27 00
1 x 3		26 00
1⅝-in. spruce laths		5 15
1½-in. spruce laths		4 90

New Brunswick Cedar Shingles

Extras		4 90
Clears		4 50
Second Clears	3 25	3 50
Clear whites		2 40
Extra 1s (Clear whites in)	1 75	2 25
Extra 1s (Clear whites out)	1 65	1 90
Red Cedar Extras, 16-in. 5 butts to 2-in.		5 25
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		5 40
Red Cedar Perfections, 5 butts to 2¼		6 00
Washington 16-in. 5 butts to 2-in. extra red cedar.		5 00



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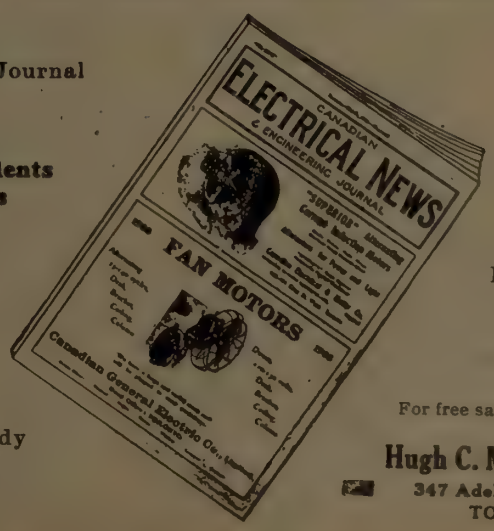

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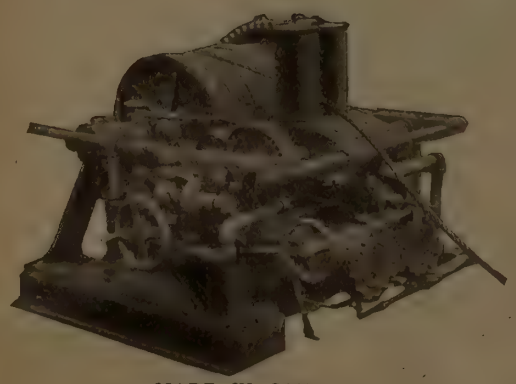

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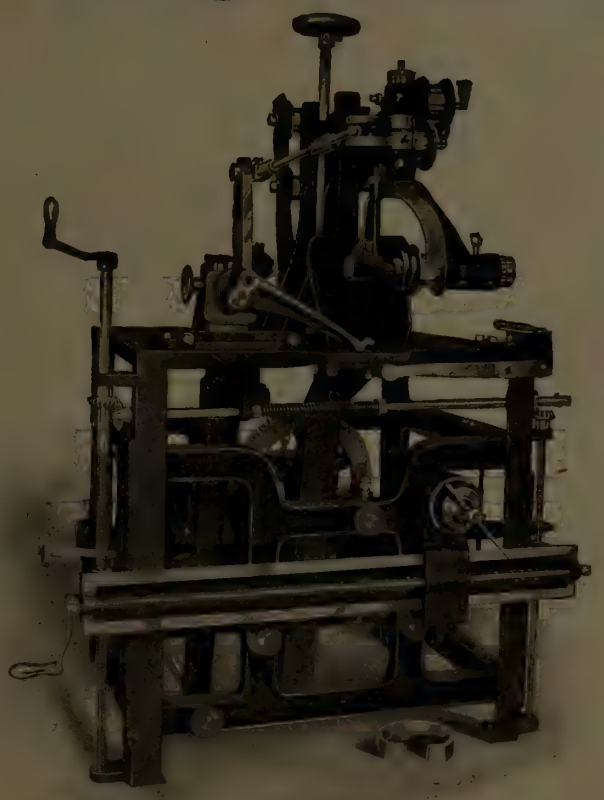

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Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Southern Lumber Company
Stout Lumber Company
Terry & Gordon

KNIVES
Disston & Sons, Henry
Peter Hay Knife Company
Simonds Canada Saw Company
Smith Company, R. H.
Waterous Engine Works Company

LATH
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Arkansas Lumber Company
Arkansas Soft Pine Bureau
Austin & Nicholsin
Chicago Lumber & Coal Co.
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
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Long Lumber Company
McGibbon Lumber Company
McLennan Lumber Company
New Ontario Colonization Company
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Shier Lumber Company, J. D.
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(Continued on page 62)

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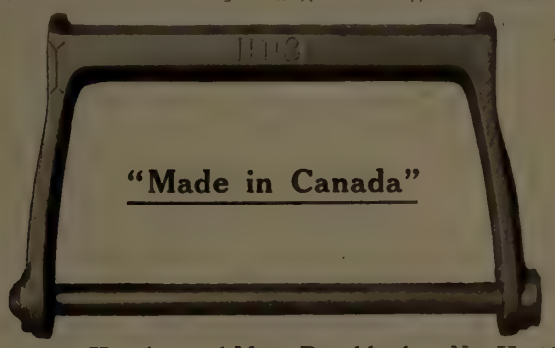

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(Continued on page 84)

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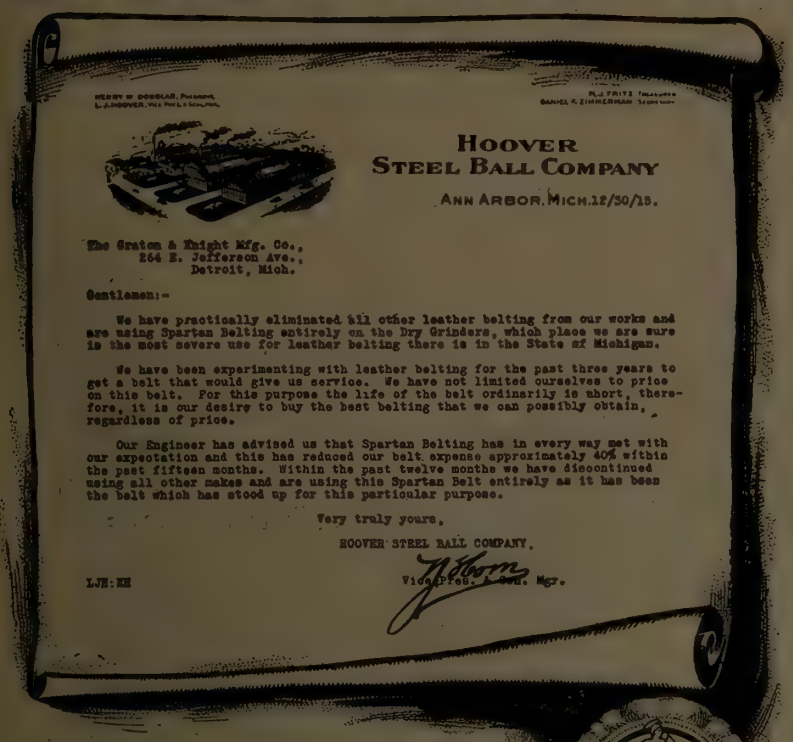

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Spartan Belting is daily proving its efficiency in plants of every description—proving it so conclusively that Spartan is fast becoming the universal equipment for all drives where the physical conditions are quickly ruinous to ordinary belting.

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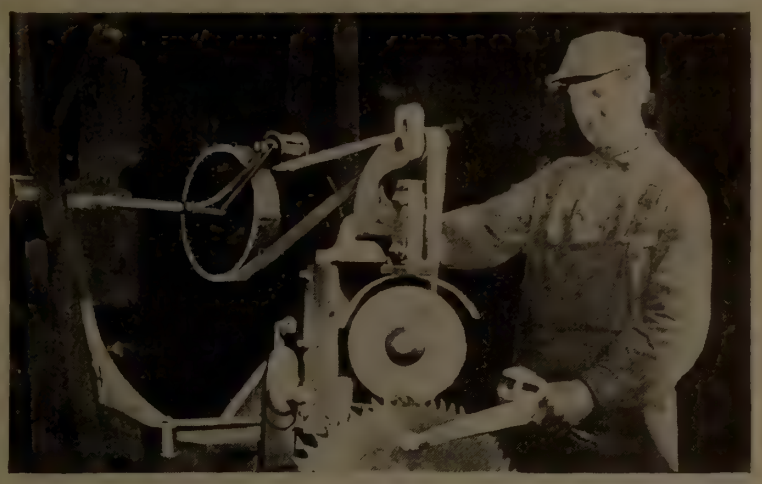

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Once you get the right wheel in the right place, once you let us send you an

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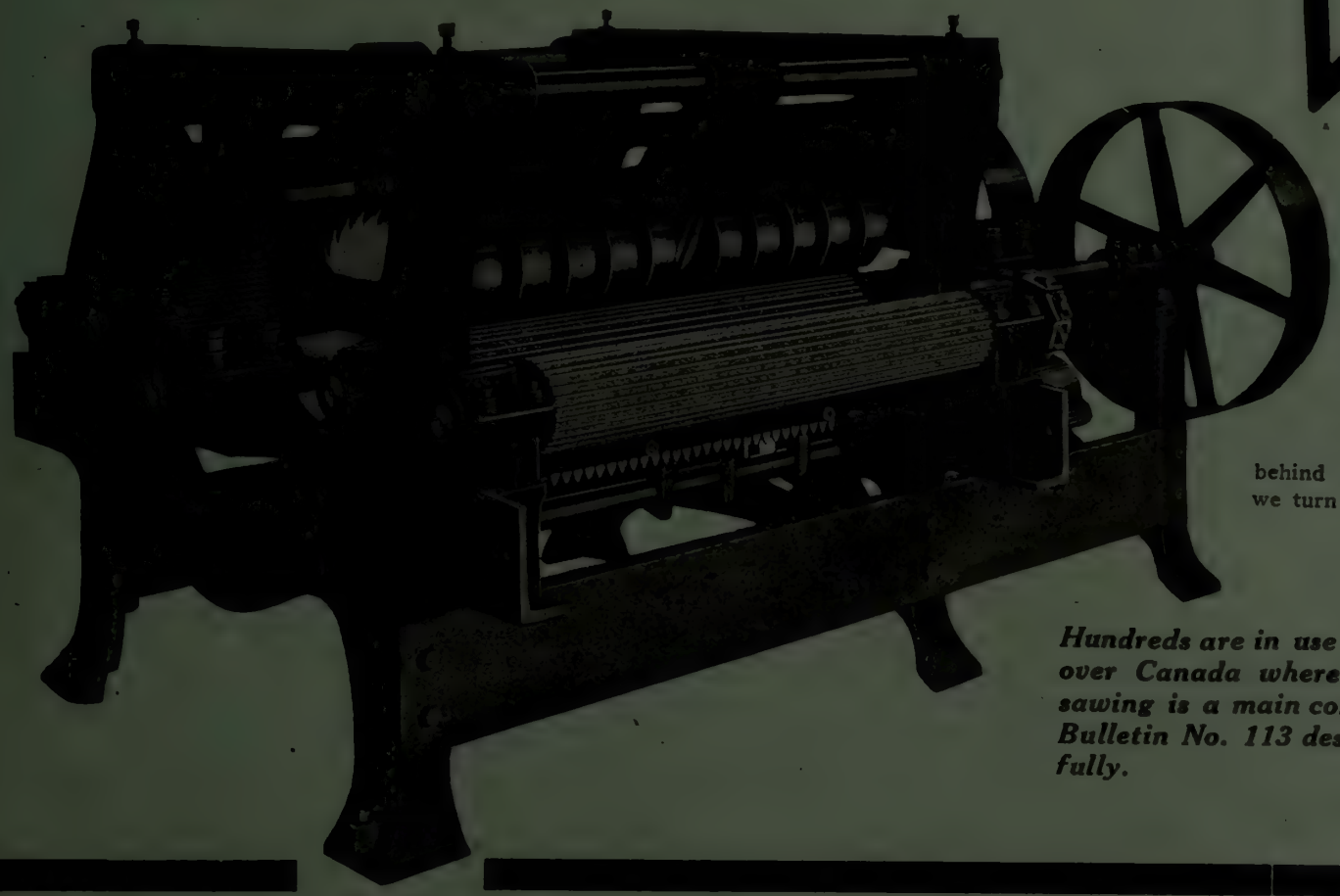

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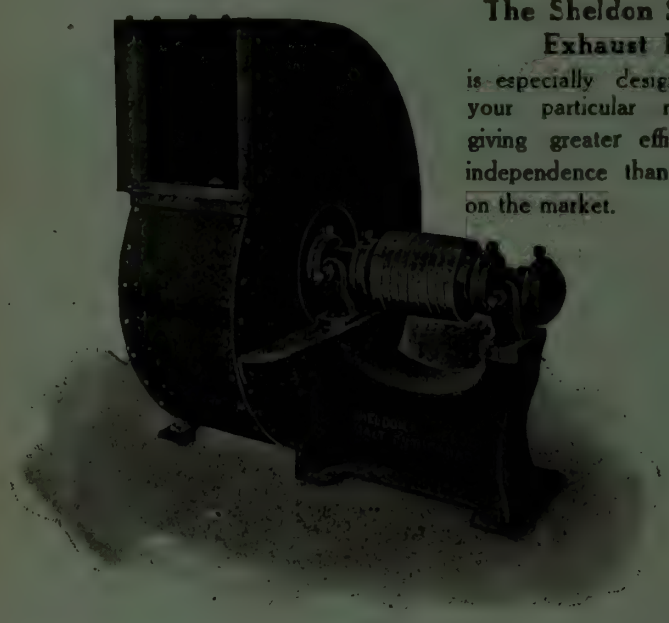

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Annual Number

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Merchantable

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Hemlock, Pine and Hardwoods

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2 cars 1 x 8—10 to 12 inch Mill Cull White Pine.

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2 cars 1 x 6 10/16 Mill Run White Pine.
1 car 1 x 12 10/16 Mill Run White Pine.
1 car 1 x 10 No. 1 Mill Cull White Pine.
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We offer choice stock in

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Inch and Two-Inch Mill Run.

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Utilization of Wood-Waste (Second Revised Edition), by Ernst Hubbard. Published in 1915 by Scott, Greenwood & Sons. 192 pages, illustrated. Price $1.50.

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Here are some high explosive shells we want to unload:

1 x 4 in. 10/16 ft.	Dry	Merchantable	Spruce,	1916	Cut	
1 x 5 in.	"	"	"	"	"	"
1 x 6 in.	"	"	"	"	"	"
1 x 7 in.	"	"	"	"	"	"
1 x 9 in., 10 in., 11 in.	"	"	"	"	"	"
2 x 5 in , 6 in., 7 in. 8 in.	"	"	"	"	"	"
3 x 9 in., 10 in., 11 in.	"	"	"	"	"	"
1 in. to 3 in. Dry Cull Spruce						

We have also a quantity of Dry 1 in., 2 in. and 3 in. Pine in almost every grade

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500,000 ft. 1 x 5 and up No. 2 Jack Pine.
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100,000 ft. 1 x 12 No. 1 Mill Cull White Pine.

Also Hemlock and Pine.

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We are Buyers of ALL GRADES

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Will contract for entire output and pay spot cash

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8 x 8—10/16
8 x 10— "
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Oak Mouldings, Doors, Sashes and Blinds, Cedar Poles and Ties,
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2 Cars 2 x 8/up—12/16 ft. Canada Dressing and Btr.
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2 " 2 x 4/7—12/16 ft. Canada Dress. and Btr.
4 " 2 x 8/up—12/16 ft. Common.
4 " 2 x 4/7—12/16 ft. Common.
10 " 2 x 4/up—6/16 ft. No. 2 Culls.
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Also these few items in Dry Lath

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2 Cars Select Red Oak
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2 Cars 4/4 No. 1 Red Oak
2 Cars 8/4 No. 1 Common White Oak
1 Car 8/4 Select White Oak
2 Cars 4/4 Select Chestnut
1 Car 6/4 1sts and 2nds Chestnut
2 Cars 5/4 Select Red Oak
The above is all West Virginia stock
300 M. 2 x 3, 6 to 16 No. 1 Cull Spruce
50 M. 2 x 3, 6 to 16 No. 2 Cull Spruce
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Can be dressed and matched
2 Million 2nd Clear Shingles
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2 Cars 4/4 No. 2 C & B Ash
1 Car 6/4 No. 1 C & B Arkansas Soft Elm

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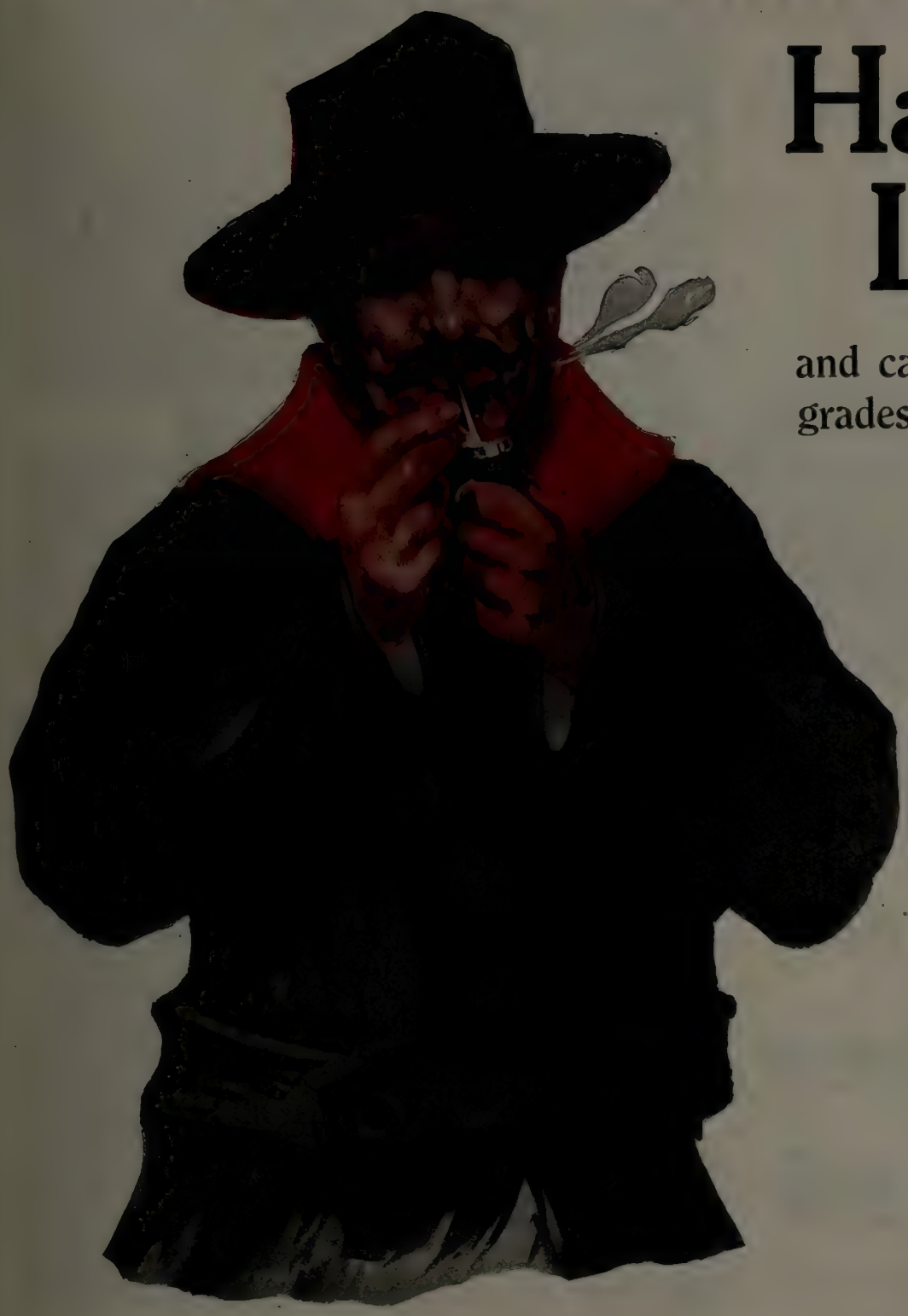

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THE

Conger Lumber Company

Limited

Mills at Parry Sound, Ontario

View of Mills at Parry Sound

Manufacturers of all kinds of

Pine and Hemlock Lumber, Timber and Lath

HEAD OFFICE:

622 Confederation Life Chambers

TORONTO, ONTARIO

Heavy Timber

We have a whole yard full of heavy Douglas Fir and Yellow Pine Timbers for all kinds of structural work. We also have the facilities for the efficient handling of this heavy material—cranes in the yard—overhead tracks in the mill—big planers and Packard trucks for delivering.

New Doors

We have a complete stock of Hardwood Interior and Front Doors in Plain and Quarter Cut Oak and Birch.

Fir and Pine Doors in sizes from 18 inches to 5 ft. wide in a number of designs, all with veneered panels.

We are in a position to supply interior trim either to detail or stock.

Our prices are interesting.

The Boake Manufacturing Company, Limited

TORONTO CANADA

FOR SALE

4 Cars 4/4 L. R. Soft Maple.
1 Car 5/4 No. 1 Common and Better Soft Elm.
2 Cars 4/4 No. 2 Common and Better Black Ash.
1 Car 6/4 No. 1 Common and Better Black Ash.
2 Cars 4/4 L. R. Mill Culls out Canadian Plain Red Oak, real nice stock.
Also 5/8 in. and 1 in. Spruce Crating.

I want to buy 4/4, 5/4 winter sawn Basswood

PERCY E. HEENEY, Wholesale Lumber
207 Weber Chambers, **KITCHENER, Ont.**
Canadian Representative D. E. HEWITT LUMBER CO., Huntington, West Va.

The
Harris Tie & Timber Co.
Ottawa - Canada
Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

Hunter & Co.
LIMITED
Wholesale Grocers
Pembroke, Ontario
(Members of Dominion Wholesale Grocers' Guild)

We make a specialty of Lumbermen's Supplies, also all kinds of Farm Produce in Car Lots, such as Hay, Oats, Beans, Peas, Potatoes, etc.

Write for quotations and save half of your present freight rates.

Wilfrid H. Pauzé
LUMBER MERCHANT—SASH and DOORS
The
Largest Eastern Warehouse of British Columbia Products

I can supply at short notice mixed carloads of

Fir Doors, Columns, Mouldings, Red Cedar Clapboards and Shingles, Fir V-Joint Sheeting, Flooring

BEAVER BOARD DISTRIBUTOR

1822 Cote des Neiges - Montreal

Crescent Lumber Company
Cincinnati, Ohio
YELLOW PINE
— SPECIALTIES —
TIMBER - DIMENSION - FINISH
Inquiries Solicited

Milne, Hall & Johns Co., Inc.
502-3-4 Gerke Bldg. CINCINNATI, OHIO
Manufacturers of
Hardwood Lumber

OUR SPECIALTY
$2\frac{1}{2}$ to 6 in. WHITE OAK
Specially selected for WAGON and IMPLEMENT use.

Send us your requirements and we will quote delivered prices.

The
Fesserton Timber Co.
Limited

Manufacturers and Wholesalers

LUMBER - LATH - SHINGLES

COOPERAGE STOCK

Large Stock of Dry Lumber on Hand

Special Bills Cut to Order

Mills at Fesserton

Phone Main 795
796

Head Office: 15 Toronto Street, TORONTO, ONT.

We carry a large stock of

Birch, Maple, Basswood
Soft Elm, Black Ash

in all thicknesses

Also handle

Spruce, Hemlock, Red and White Pine

Send us your inquiries

HART & McDONAGH, 513 Continental Life Building, TORONTO

PHONE MAIN. 2262

Portable Houses Shell Boxes

Our facilities are unexcelled for making portable houses, shell boxes and other planing mill products

We are also equipped to do milling in transit, and have the men and equipment to produce the highest grade of work.

Renfrew Planing Mill
Renfrew, Ont.

Always Buy
"Made in Canada"
Products

WILLIAM POWER, M. P.
PRESIDENT, QUEBEC

W. GERARD POWER
MAN. AND SECY., ST. PACOME

RIVER QUELLE PULP & LUMBER CO.

St. Pacome, Quebec

Exterior of Mill at St. Pacome, Que.

Manufacturers of

Lumber Lath and Pulpwood

OUR Prime Quebec Spruce of most careful and unexcelled manufacture is the most serviceable lumber of the present day.

Interior of Mill at St. Pacome, Que.

CORRESPONDENCE SOLICITED FROM HOME AND FOREIGN BUYERS

Head Office at ST. PACOME, Quebec, Canada

On the I. C. R. 75 Miles East of Quebec City

Mills at St. Pacome, and Crown Lake, River Manie, and Powerville, on Nat. Trans. Ry.

PAPER

We have one of the largest and most modernly equipped Paper Mills in Canada, and can supply dealers promptly with any size shipments on advantageous contract terms. Our Brompton Kraft Paper is worthy of your careful attention. We claim it to be the strongest paper and the best value on the market. Our ground wood pulp is made from pure Spruce wood of uniform high quality.

Write us for quotations on any of our lines as shown. Your business will receive prompt attention at all times.

News Print
Kraft Paper
Sulphate Pulp
Box Board
Ground Wood Pulp
Building and Fibre Papers
Clapboards
Shingles
and
LUMBER
of every description

Brompton Pulp & Paper Company Limited

F. N. McCrea, President
W. N. Munroe, Treasurer
J. A. Bothwell, General Manager

Daily Production:—
60 Tons News Print
320 " Ground Wood Pulp (Dry)
90 " Sulphate Pulp (Dry)
60 " Kraft Paper (Dry)
40 " Box Board

Lumber of all Kinds: Clapboards, Shingles and Pulpwood

Mills at East Angus and Bromptonville, P. Que.

Saw Mill and Pulpwood Mill

Lumber Yard

Spruce, Balsam, Tamarac Whitewood and Poplar Lumber Spruce and Whitewood Lath

PLANING MILL IN CONNECTION WITH SAW MILL

Rossed Spruce Pulpwood

Rich Clay Loam Lands for Sale

Townships of Haggart and Kendry. District of Temiskaming. Excellent opportunities for the settler.

Notice below what these lands produce.

Write for particulars

New Ontario Colonization Co.

Limited

Sales Office, BUFFALO, N. Y.

Mills:—Jacksonboro, Ont. Located on Transcontinental R. R.,

32 Miles west of Cochrane.

Exhibi : Cochrane Agriculture Society, Grains and Vegetables from Cochrane, JACKSONBORO and Vicinity

The Riordon Pulp & Paper Co., Limited

Saw Mills at Calumet, Que.

PULP MILLS at: Merritton, Ont., and Hawkesbury, Ont.
LUMBER MILLS at: Calumet, L'Annonciation, Boule, Quennouille and St. Faustin, Quebec.
SALES OFFICE: No. 1 Beaver Hall Square, MONTREAL

Spruce and Birch Lumber, Shingles, Clapboards, Railway Ties and Fence Posts. IMPERVIOUS SULPHITE SHEATHING PAPER

Merritton Bleached Sulphite Mills

Sulphite Mills at Hawkesbury, Ont.—Capacity 57,000 tons per year.

(BLEACHED AND UNBLEACHED SULPHITE FIBRE, WOOD PULP, FOR PAPER MILLS)

Province of Quebec

TIMBER LANDS

Timber Lands

License or permission to cut timber on public lands in this Province is acquired at public auction, after due notice has been given, subject to a yearly ground rent of $5 per square mile, and is renewable annually, provided the licensee shall have complied with the regulations.

The timber cut in virtue of such license is subject to a tariff of dues fixed by order in council.

The present rate of ground rent and tariff dues shall not be increased until the 1st of September, 1920.

Licensees are forbidden to cut on Crown lands trees less than a fixed diameter.

The Regulations also provide that all timber cut on Crown lands must be manufactured in Canada.

In the event of a licensee wishing to transfer his rights, he is at liberty to do so under certain conditions, namely, the paying of a fee of $4 per square mile.

There are at present time about 75,000 square miles of forest lands under license and over 150,000 miles in the possession of the Crown.

WATER POWERS

Water Powers

To obtain authorization for the utilization of a Water-Power in the Province of Quebec, application should be made to the Honourable Minister of Lands and Forests.

Water-Falls capable of developing over 200 H.P. are granted under emphyteutic leases, the conditions of which are upon the following lines:

1.—Duration of the lease, from 25 to 99 years, according to the importance of the water-power and to the amount of capital required for its development.

2.—Payment of a yearly rental which does not vary during the term of the lease, for the land granted, counting from the date when the contract was signed.

3.—An additional yearly charge of from 10 to 35 cents per H.P. developed according to the geographical situation of the site of the water-power; such charge being payable from the time the power is produced.

4.—The above charge is subject to revision every 21 years, counting from the signing of the contract.

5.—Delay of 2 years for beginning works and 2 further years for producing power.

6.—The lessee to make a deposit in money or in securities as a guarantee of good faith of the carrying out of the contract. Such deposit may be forfeited if the conditions are not fulfilled; but it may be repaid after a certain time, in the contrary case.

7.—Lastly, the grantee must submit plans of his works, mills, etc., to the Department previous to their installation, and, when such installation is completed, he must keep the Department informed as to the quantity of power produced.

Department of Lands and Forests
of the Province of Quebec

Elz. Miville Dechene,
Deputy Minister

The Pink Line Logging Tools and Handles

Made in Canada by Thomas Pink Co., Limited

Our many years in this one line of work has enabled us to turn out a superior line of Logging Tools. We supply leading Lumber Companies in Canada, Australia, New Zealand and Straits Settlements

Write for Catalog and Price List.

Our Logging Tools are sold by leading Wholesale and Retail Hardware Merchants throughout the Dominion.

The Thomas Pink Co., Limited

Pembroke :: Ontario

Logging and Flat Cars Log Loaders

Etc.

Always have on hand a full line of

Rails–Yard Locomotives–Cars

NEW AND SECOND-HAND

12 to 80 Pound Rail Carried in Stock. Track Tools, etc.

John J. Gartshore

58 Front Street West

TORONTO - ONT.

Smart-Woods LIMITED CANADA

LIEUT.-COL. JAMES W. WOODS

President and General Manager of Smart-Woods, Limited, owning and operating WOODS, LIMITED, Ottawa, Montreal and Winnipeg, contractors to His Majesty's Government, manufacturing Clothing, Tents and Camp Equipment, Lumbermen's and Contractors' supplies; THE SMART BAG COMPANY, Montreal, Toronto and Winnipeg, manufacturing Jute and Cotton Bags of every description; THE EMPIRE COTTON MILLS, LIMITED, Welland, Ont., manufacturing Cotton Ducks, Canvases, Sheetings, etc.; THE RENFREW KNITTING COMPANY, LIMITED, Renfrew, Ont., manufacturing Blankets, Woollens, Socks, etc.

From the above it will be seen that Smart-Woods, Limited, is in a most enviable position to supply every need of the Lumberman and Railroad Contractor who desires to buy at the lowest possible price, as all middlemen's profits are eliminated by this concern.

Quotations are readily supplied. No order too large—none too small

Smart-Woods LIMITED CANADA

Ottawa - Montreal - Toronto - Winnipeg

Smart-Woods LIMITED CANADA

Smart-Woods Tents

"THE BEST MADE"

All materials used in the making of Smart-Woods' Tents are the very best manufactured. Woods' Non-Absorbent Duck is exclusively our own product and is made at our own mills at Welland, Ont., from specifications of the highest standard.

Shelter Tent

Used for Railroading and River Driving. Made in five sizes. Can be arranged for either inside or outside poles.

Pyramid Tent

For Lumbering and Prospecting. Made in three sizes—7 x 7½ x 7, 9 x 9 x 7½, 10 x 10 x 8. Prices quoted on application.

Stable Tents

These tents are strongly made, being reinforced by heavy manilla rope where strain is greatest, and are easily erected and adjusted. Rooms at corners or centre of ends. Made in five sizes.

Smart-Woods LIMITED CANADA

Ottawa - Montreal - Toronto - Winnipeg

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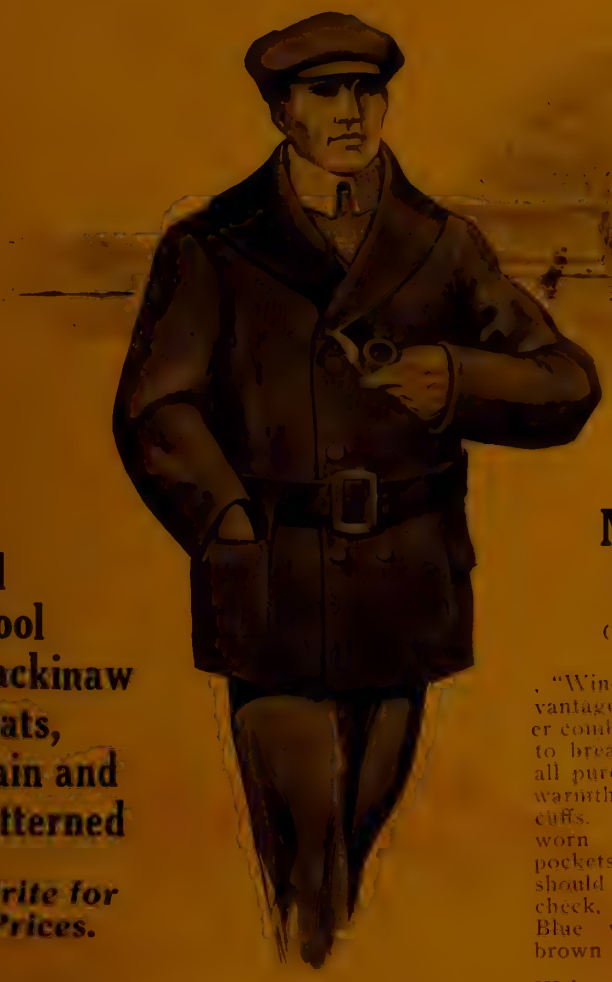
Smart-Woods Clothing

Mackinaw Garments



All Wool Mackinaw Coats, Plain and Patterned

Write for Prices.

Mackinaw Sweaters

(SOMETHING NEW)

"Wind Break" has all the advantages of a sweater and jumper combined. Heavy felted cloth to break the wind. Absolutely all pure wool which guarantees warmth. Knit wool sweater cuffs. Adjustable collar to be worn open or closed. Two pockets placed where they should be. Grey with black check, red with black check. Blue with black check and brown with black check.

Write for prices and samples.

All-wool Long Stockings, as cut. Black or fancy striped or checked.

All-wool Mackinaw Knickers, as cut. Top and hip pockets. Strap or wool cuff. Sizes 32 to 44. Black shades.

Men's Heavy Pure Wool Mackinaw Pants, as cut. Black only. Generous sizes, well made.

Smart-Woods LIMITED CANADA

Write for Catalogue

Ottawa - Montreal - Toronto - Winnipeg

Smart-Woods LIMITED CANADA

Galbaduk TRADE MARK

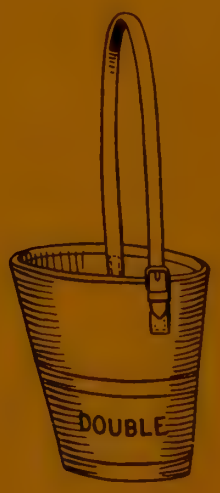
A Smart-Woods Product

The above trademark on your Horse Covers, Tarpaulins, Tents, etc., is a guarantee that you are using a "watertite" canvas of highest quality. A canvas absolutely waterproof and protected from mildew and decay through a special process, machine applied, that penetrates every fibre of the canvas, strengthens every thread, and suitable for every purpose where a "watertite" duck is required. "Galbaduk" is made in Green and Brown. The color won't rub out; the longer it is in use the more solid the color becomes. **Sample book and catalog will be mailed upon application.**

Style B Horse Cover

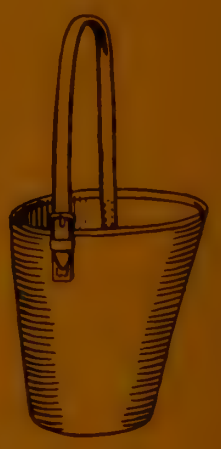
Horse Covers in three styles; hames to tail fitted with breaching straps and hame, breast to tail with breast and breaching straps, hame leathers and rein holes, and loin covers for heavy dray horses. Green or Brown Shades, and always ready in stock for shipment. Get our prices.

"Galbaduk" Tarpaulins—soft, strong, durable and watertite. Protect your stock from the elements. Made to withstand rain, snow, or sleet. Send for samples.



"Galbaduk" Feed Bags and Water Buckets

Farmers, Teamsters, and others who are constantly driving long distances should always carry one of our handy folding **"Galbaduk" Feed Bags and Water Buckets.** Saves much time and labor, and fits in anywhere, under the seat or in any corner of the wagon or buggy.



Smart-Woods LIMITED

CANADA

Ottawa - Montreal - Toronto - Winnipeg

Bain Sleighs for Logging Operations

Logging is a severe test of a sleigh.

Therefore it pays to buy the best—one that has stood the test of time and hard usage—even though the first cost may be considerably more than one which may look just as good.

Bain Sleighs are famous for Light Draft and Great Capacity

The Bain One-Beam Midland Sloop Sleigh

Clearance under Beam 7 in.

Steel shoes, short reach coupling; the blocks on runners give great strength; 2 ft. 10 in. or 3 ft track.

The Bain Improved Sloop Sleigh

Clearance under Beam 7 in.

Steel shoes, short reach coupling with swivel; 3 ft. track.

The Bain One-Beam North Shore Bob Sleigh

Clearance under Beam 9½ in.

Steel shoes, swing bunks or bolsters; cross chain coupling 2 ft. 10 in., or 3 ft. track.

The Bain Improved One Beam Bob Sleigh

Clearance under Beam 9½in.

Steel shoes, flexible rear bob; 2 ft. 10 in. or 3 ft. track.

The Bain North Shore Sloop Sleigh

Clearance under Beam 7 in.

Steel shoes, cross chain coupling; 2 ft. 10 in. or 3 ft. track.

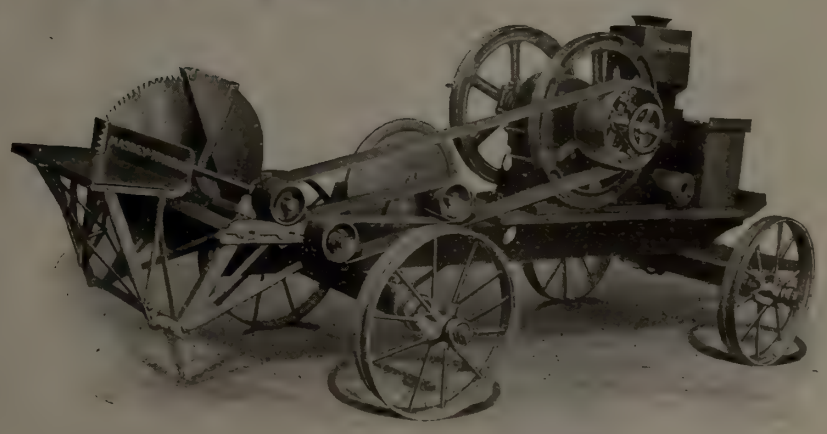
The Bain Heavy Sloop Sleigh

Clearance under Beam 7 in.

Steel shoes, short reach or cross chain coupling; 3 ft. 4 in., 4 ft. 4 in., or 4 ft. 8 in. track.

Massey-Harris Saw Outfits

Stationary or Portable, driven by the reliable Massey-Harris Gasoline Engine, for sawing Cordwood, Pulpwood, Poles, etc



Massey-Harris Engines

Provide an Efficient and Economical Source of Power

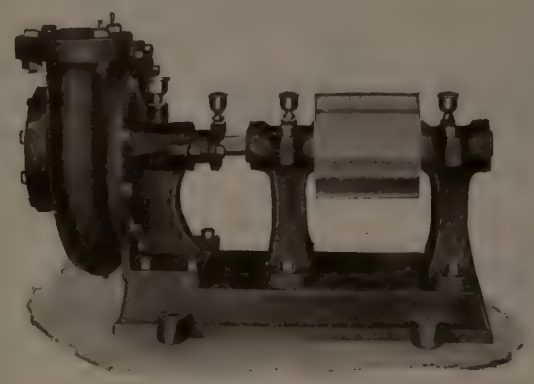
Stationary Portable or Semi-Portable, 1½ to 20 Horse Power.

Massey-Harris Co., Limited

HEAD OFFICES: TORONTO

Branches at—**Montreal Moncton, Winnipeg, Regina, Saskatoon, Yorkton, Swift Current, Calgary Edmonton**

AGENCIES EVERYWHERE



PUMPS

Vertical
Horizontal

Steam
Power

The Smart-Turner Machine Co., Ltd., HAMILTON CANADA

ASBESTOS

We manufacture practically every article that can be made of Asbestos—including

Asbestos { Packings, Boiler Gaskets, Pipe and Boiler Coverings

Atlas Asbestos Co., Limited, Montreal

(Formerly Turner Bros. Canada Limited)

Rubber Goods FOR LUMBERMEN

Belting Our long experience in the making of Rubber Belts enables us to specialize on this line. "P.M.S.," "Special Drive" and "Lion" are our leading brands for power transmission.

Packings "Redstone" High Pressure Sheet Packing has proved by test that it will outlast any other similar packing on the market. We make Spiral and Ring Packings, etc., that are equally reliable.

Hose for Steam, Water, etc., in various grades, made especially to give satisfactory and economical service under different conditions.

Fire Hose One or more of our twenty brands of Fire Hose will be found, not only in the best equipped Factories, Mills, etc., but in almost every Fire Department in the Dominion.

Gutta Percha & Rubber, Limited

TORONTO MONTREAL WINNIPEG REGINA SASKATOON CALGARY EDMONTON VANCOUVER

MORRISON Jet Pump or Water Lifter operates by water pressure.

J. M. T. Steam Specialties

J. M. T. Steam goods have been designed to meet present-day needs. They are made of high-grade materials only, and the workmanship is high class and thoroughly dependable.

Whether you need stop valves, safety valves, ejectors, injectors, or any other steam goods, you can select your requirements from the J. M. T. line with the full assurance that they will give highest efficiency.

Prices, etc., sent on request.

The James Morrison Brass Mfg. Co., Ltd., 93-97 Adelaide Street West TORONTO

The Acid Test

The placing of any article under the severest strain of use to determine its maximum value for which that article is specially adapted, might be termed the "acid test" of efficiency.

"Lion Brand" cordage will stand the "acid test" like the British Army. "What it has it holds."

"A chain is no stronger than its weakest link." This adage may be applied to rope. If there are any "weak links" in your rope, it isn't "Lion Brand."

Ninety-two years in the manufacture of cordage is a fact to consider when you purchase your supply of rope or lath yarn. Every year of that time has been utilized in endeavoring to make our cordage 100 per cent. efficient. Every bit of hemp, from the time it enters the "breaker" until it is a finished product, has the critical attention of our experts. We make it second to none.

Solve your transmission problems with "Lion Brand" rope, and keep in mind we manufacture the highest grade of lath yarn. We have rope for your every purpose.

"Lion Brand" is a "made-in-Canada" product. That means something. Europe has learned that the human parcels wrapped in khaki which come from Canada are put together to stand the "acid test," and they do.

"Lion Brand" is a "Canada" brand, and stands for the traditions of Canada.

Consumers Cordage Co., Limited

285 St. Patrick Street, MONTREAL, Que.

MONTREAL HALIFAX ST. JOHN, N.B. TORONTO 11 Church Street

Tees & Persse, Ltd., Winnipeg, Regina, Saskatoon, Moose Jaw, Calgary, Edmonton, Fort William

Agents and Stocks at: James Bisset & Co., QUEBEC; Macgowan & Co., VANCOUVER

Our Rebuilt Locomotives give good service to Lumber Interests

Locomotives of every size that are delivered from our shops give service for as great a length of time without repairs as new equipment. All worn parts are replaced and refitted with the most exacting care. We can make immediate shipments of a number of Mogul, 10-wheel switching and saddle-tank Locomotives.

Write us for bulletins, photos, specifications and prices.

Dump Cars
Flat Cars
Passenger Coaches
Box Cars
Locomotives
Locomotive Cranes
Steam Shovels
Drag Lines
Contractors' and Railway Equipment

CANADIAN EQUIPMENT CO.

LIMITED

MONTREAL

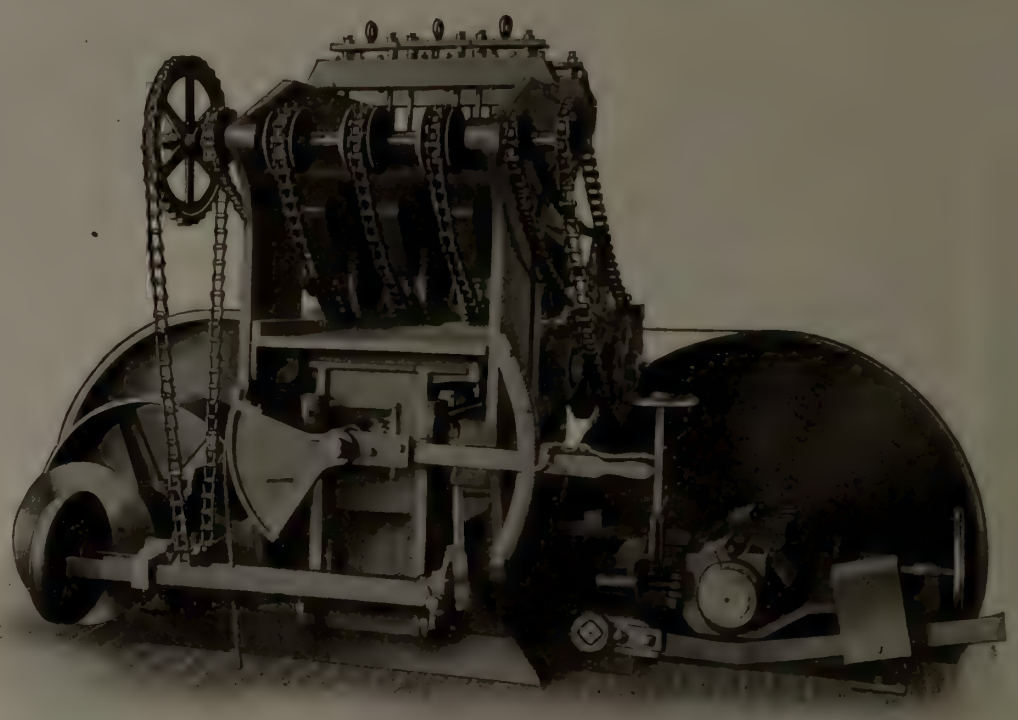
The Choice of Time
The man who judges belts by the length of their service will consider
Sadler & Haworth Belting
a truly remarkable product
Sadler & Haworth
Tanners and Manufacturers of Oak Tanned Leather Belting since 1876.
511 William Street, Montreal, P.Q.
Toronto, Ont. 38 Wellington E.
Winnipeg, Man. Galt Building
Vancouver, B.C. 111 Water Street
St. John, N.B. 49 Prince William Street.
"Leather, Like Gold, Has No Substitute."

Box Lumber is in Active Demand Now

and chances are it always will be

Our Horizontal Slab Re-Saws

are designed to re-saw slabs, edgings, bolts, etc., into Box Lumber, lath and other marketable stock.



No. 25 Slab Re-Saw

Ask for List of Canadian Users.

Our Line of Box Machinery includes the following:

Hopper Feed Box Resaws
Vertical Re-saws
Auto Box Board Squeezers
Box Board Matchers
Bottle Box Groovers
Recessing and Hand Hold Machines
Gang Cleat Machines
Hopper Feed Equalizers
Ferris Wheel Gang Trimmers
Saw Tables (all kinds)
Short Lumber Edgers
Short Lumber Trimmers

WRITE FOR CATALOG

Mereen Johnson Machine Co.

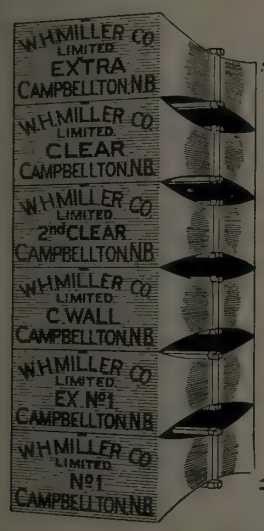
Minneapolis, Minn., U. S. A.

MARITIME PROVINCES

Let us quote you on your requirements for:

Spruce and Pine Lumber

We manufacture and export all kinds of it



WE SPECIALIZE IN

New Brunswick White Cedar Shingles

LET US QUOTE YOU

We also manufacture

Laths and Ties Pulpwood

Shipments by Rail and Water

PROMPT—RELIABLE—CAREFULLY HANDLED

W. H. Miller Co., Limited

CAMPBELLTON, N.B.

Blenkhorn's Chief

The essential quality of a good axe is its ability to take and hold a keen cutting edge. By using the finest grades of steel properly tempered, we have won a just reputation for marketing a perfect axe. Every "Blenkhorn Chief" is carefully inspected before shipment.

BUY THE BLENKHORN AXE

Get Our Prices

Blenkhorn & Sons

Canning, N.S.

The Glue Book

What it Contains:

Chapter 1—Historical Notes.
Chapter 2—Manufacture of Glue.
Chapter 3—Testing and Grading.
Chapter 4—Methods in the Glue Room.
Chapter 5—Glue Room Equipment.
Chapter 6—Selection of Glue.

Price 50 cents

Canada Lumberman & Woodworker

347 Adelaide St. West, Toronto

BATHURST

Car Famine Coming

SOON Canada and the United States will be face to face with the beginning of the greatest car shortage in their history.

Added to this will be a serious labor famine. The harvesting of the crops this year is a matter of vital necessity, and as a large proportion of the men employed in lumber mills and yards are also workers on the land, thousands of them will be withdrawn from lumbering pursuits and sent harvesting.

At present the car service is comparatively fair, although far from satisfactory, but before long there will be neither cars to load nor men to load them.

Most urgently do we ask our customers to place their orders now for rush shipment of their Fall and Winter requirements in Lumber and Shingles.

Forewarned is forearmed. Wire or 'phone your orders while we can make shipment.

Our Monthly Stock and Price List gives full particulars of our large stocks of Spruce and Pine Lumber. Consult it and wire us.

BATHURST LUMBER COMPANY, LIMITED

BATHURST, N.B.

BATHURST

BATHURST

Our Resources and Facilities

OUR resources include almost inexhaustible forests of timber in Spruce, Pine and Hemlock.

Our facilities include the latest saw and planing mill equipment for surfacing, jointing, matching, resawing and ripping.

Prices and complete particulars gladly furnished upon request.

Rail or water shipments.

BATHURST LUMBER COMPANY, LIMITED
BATHURST, N. B.

BATHURST

Palmer-McLellan Shoepack Co., Ltd.

Fredericton, N.B.

BE FULLY ASSURED OF FOOTWEAR SERVICE

CHROMOIL PACKS

are footwear assurance for woodsmen

ASSURANCE of strength to withstand the extreme wear-and-tear which footwear must stand in the Lumber Woods.

ASSURANCE that men will have dry feet, thus adding much to labor efficiency.

ASSURANCE of the greatest durability, which is assurance of a lower final cost.

Therefore be **ASSURED** of the best footwear service possible by equipping your men with **CHROMOIL SHOEPACKS.**

Made by

PALMER-McLELLAN SHOEPACK CO., LTD.

Fredericton, N.B.

Write us for Prices and Samples

"OXFORD" PANTS

The Universal Choice of the Lumberman

Give Better Wear — and the middleman's profit is cut out

SOME OXFORD FEATURES

Waist Band, narrow, of neat and attractive material, exclusively designed for "Oxford," and sewn firmly through the body of the pant. Double-stitched edge on waist band.

Pockets—four instead of the usual three, cut deep, and of a battleship grey material.

Seams—sewn with a special four-cord thread. Seat seam and crotch reinforced and double-stitched.

Buttons—Rivetted Steel.

Design—cut extra large in seat for ease and comfort in working, ample height at waist band.

Pockets and Fly, strengthened with strong bar tacking.

Heel Treads, rubber gummed and felled.

WRITE FOR PRICES

Oxford Manufacturing Company Limited

Oxford, N. S.

J. & D. A. Harquail

Company, Limited

Manufacturers of Lumber

Extensive New Brunswick and Quebec timber limits, abundant with Virgin Spruce, Pine and Hardwoods.

Twenty years' experience in Milling and Manufacturing, together with a practical knowledge of Building and Architecture, is why our Customers tell us that the Dressing, Grading, and Manufacture of our Stock is just a little better than they expected.

Large stocks of 1 in. Spruce Lumber always on hand.

Try a car of our Air-dried Dressed Spruce.

We also make a Specialty of Kiln Dried Stock.

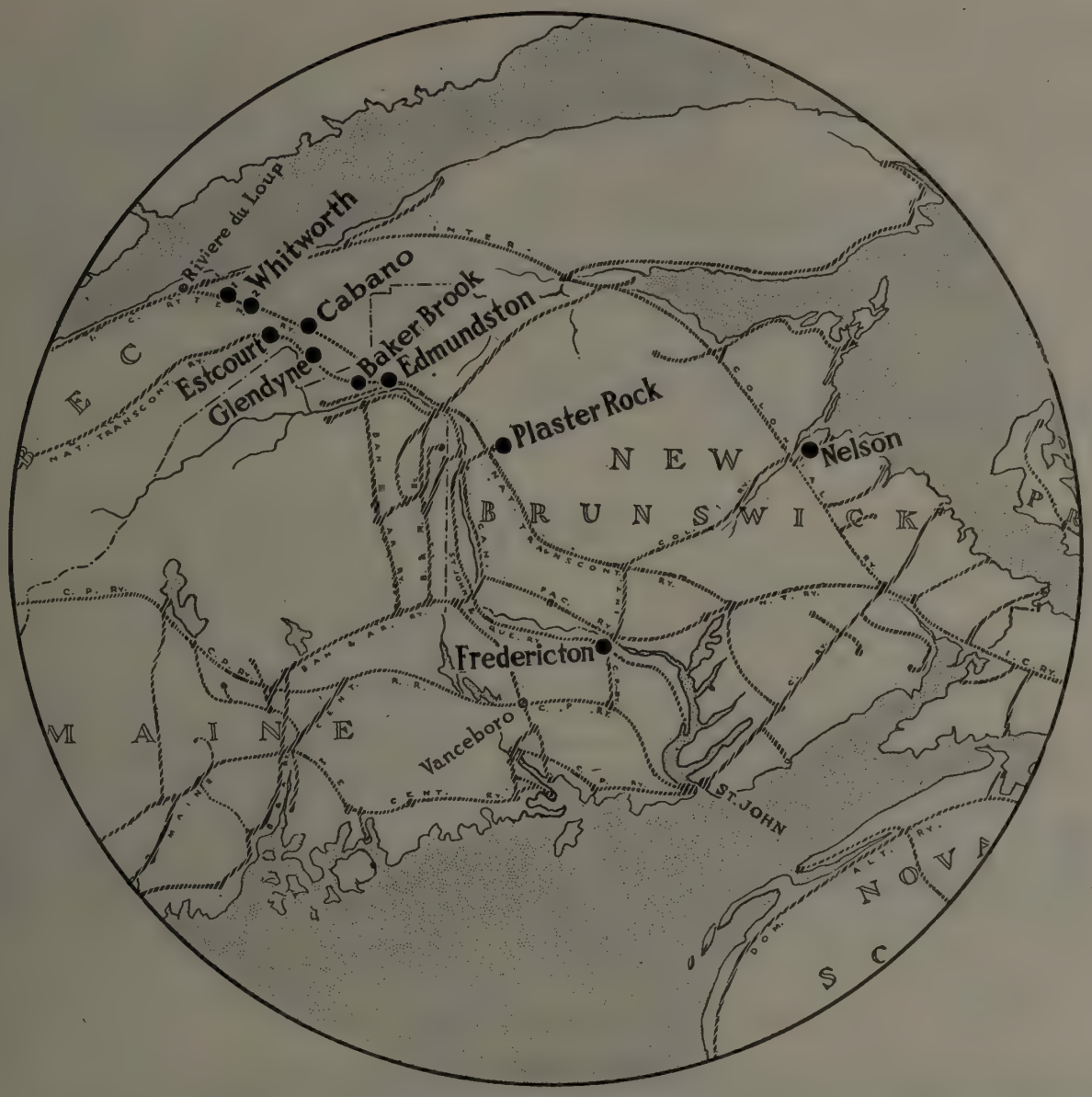
Our personal attention given to every detail.

Write, wire or phone us for quotations.

Established 1894 ***Incorporated 1908***

Campbellton, New Brunswick

Ten Band Mills to Serve You



Mills and Railway Connections

Fredericton, N.B.	Railway connection		C. P. R.
Plaster Rock, N.B.	"	"	C. P. R.
Nelson, N.B.	"	"	I. C. R.
Edmundston, N.B.	"	"	C. P. R. or Temiscouata Ry.
Baker Brook, N.B.	"	"	Temiscouata Ry. and N.T.R.
Glendyne, Que.	"	"	N. T. R.
Escourt, Que.	"	"	N. T. R.
Cabano, Que.	"	"	Temiscouata Ry.
Whitworth, Que. (No. 1, No. 2)	"	"	Temiscouata Ry.

Fraser Limited, Fredericton, N. B.

ROUGH AND DRESSED SPRUCE, WHITE CEDAR SHINGLES, SPRUCE LATH, PIANO SOUNDING BOARD STOCK.

Manufacturers of

High-Grade BRASS and IRON

Mill, Lumbering and Mining Supplies

T. McAVITY & SONS, Ltd.

Hardware & Metal Merchants
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St. John, N.B., Canada

The Enterprise Camper Steel Range

Just the Thing for Your Camp

The Enterprise Camper is built to meet the requirements of camp cooking conditions. It combines large capacity, generous dimensions, durability and perfect operation with compact construction.

Burns wood or coal. The fire box takes a stick of wood 32 inches long. The oven is extra large and fitted with a strong, well braced door which opens level with the oven bottom. Will cook for 60 to 100 men.

Is made of highest quality Bessemer Steel and fitted with exceptionally heavy castings.

No. 924—Top measurements with reservoir and shelf 61 in. x 33 in. Oven 24 in.. wide x 25 in. deep and 15 in. high.

No. 1030—Top measurement with reservoir without shelf 62 in. x 33 in. Oven 30 in. wide x 25 in. deep and 15 in. high.

We can supply detachable copper reservoir and large waterfront when required.

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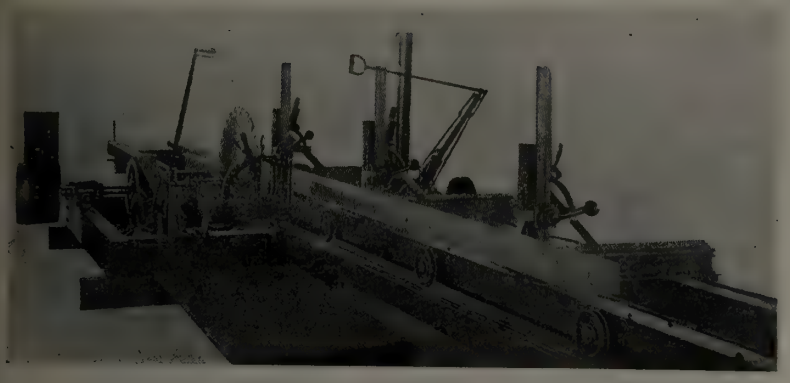
The OXFORD Line

of Sawmill Machinery



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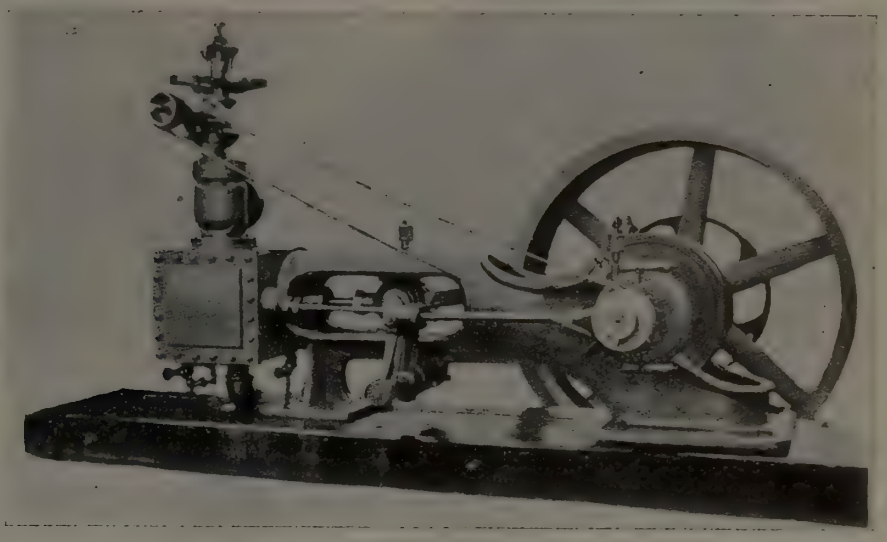
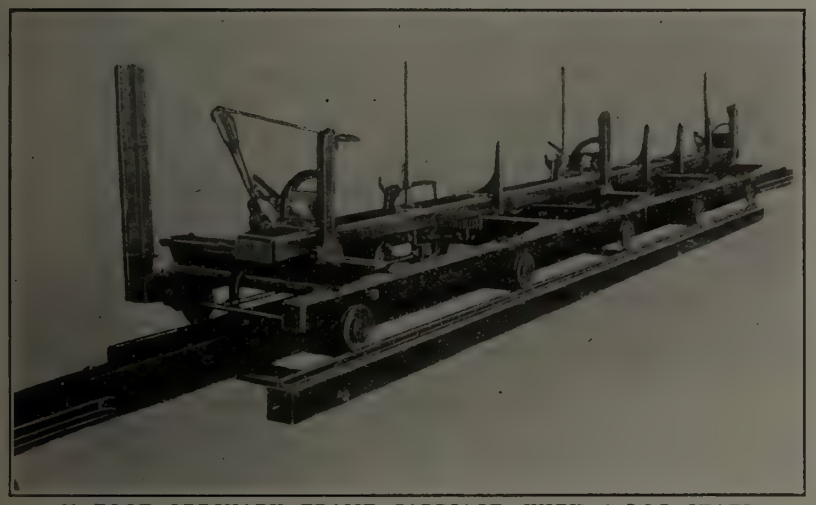


HORIZONTAL ENGINE.



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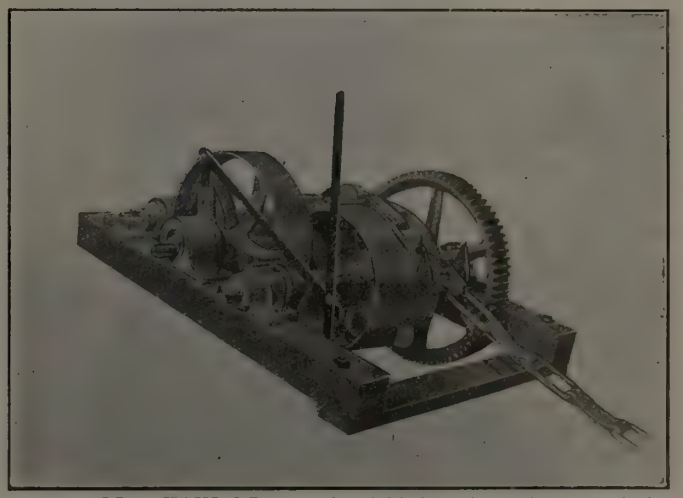
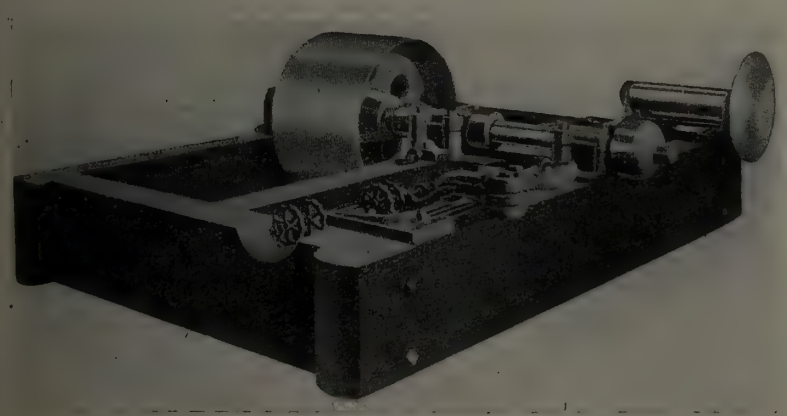


ENDLESS HAUL UP; geared and friction with 30 inch by 4 inch face gear, 6 inch by 4 inch face pinion, 30 inch by 6 inch face cast iron friction, 6 inch leatherboard friction, pulley sprocket 21 inch by 14 inch with forged lugs, eccentric, box and iron lever, for use with our forged chain with steel or cast iron carriers.



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HEAVY CARRIAGE, steel faced, designed for dogger and setter to ride.

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OXFORD, N. S.

No. 20

No. 36

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FREDERICTON N.B.

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Oil Tanned Shoe Packs

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No. 20. Men's Skowhegan, "Moose Head Brand" waterproof Shoepack. Also made by our Draw-string, non-rip, non-leak process.

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MOOSE HEAD BRAND
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The Banner Province

Ontario has pulpwood areas practically illimitable, and offers a great field for those desirous of embarking in the pulp and paper making industry.

Ontario has innumerable waterfalls capable of supplying power for all manufacturing purposes, which are obtainable on reasonable terms subject to development.

Ontario has large pulp and paper mills in operation at Iroquois Falls, Metagami, Ottawa, Sturgeon Falls, Spanish River, Sault Ste. Marie, Dryden and Fort Frances.

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Ontario's natural resources of mineral, pulpwood, timber and water powers are unequalled in the Dominion of Canada.

For full particulars as to Ontario's great resources and the advantages offered for large wood-using industries, apply to—

Honourable G. H. Ferguson,
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L. A. DeLaplante Limited

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PRIVATE PHONE EXCHANGE MAIN ST.

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Ball Bearing C/o

Dear Sirs
in regard to double ball bearings supplied by you, we find those on line shaft giving entire satisfaction and find them quite a saving on power, as for the ball bearing loose pulleys, they are decidedly the finest, and only satisfactory loose pulley we have ever had, no noise or sewing and consequently no loss of time, which so frequently occurs with the ordinary loose pulley, we have run the loose pulley on our big matcher for nearly two years and consider it a severe test and it runs as nice to day as the first day we used it can recommend your bearings and pulleys to any one in the manufacturing business especially planing mill work which we have proved.

Yours very truly
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per W. Graham Supt.

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have been installed in over 3000 factories of all classes during the past fifteen years, and the above letter is one of many of a similar import, bearing testimony to the efficiency, long life, and cleanliness of the bearing. Some of these have been compiled in a booklet, "Results", which we will be pleased to send on request.

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"Frost King"
Babbitt Metal

Our over 40 years of experience in the mixing of babbitt metals has enabled us to arrive at those proportions in mixing which make for cool, non-friction and lasting bearings.

Our "Frost King" Babbitt Metal is specially mixed for high-speed machinery and engine work, sawmills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery and all classes of stationary engines.

If your dealer does not stock FROST KING, send us a money order for your requirements. Price 35c. per lb. Fort William and East; West of Fort William 38c. delivered to your nearest railway station, packed in 30lb. and 60lb. boxes.

For extra duty, such as over-hanging saws, our "TROJAN" BABBITT will stand where all other metals will fail. Price, Fort William and East, 60c. per lb.; West of Fort William 65c. per lb., delivered to your nearest railway station, packed in 30lb. and 60lb. boxes.

Hoyt Metal Co.

Toronto, Ont.

New York ***St. Louis*** ***London, Eng.***

Alleged Profits of The William Davies Company in 1916 on Bacon, as Indicated by Department of Labor to be Five Cents per Pound, Untrue:

Actual Profits Two-Thirds of a Cent Per Pound

THE statement issued by the Department of Labor concerning the business of The William Davies Company Limited has been given widespread circulation throughout the country and provoked public unrest.

Whatever the technical wording of the report was, the effect has been that the newspapers have published that "the profits on Bacon alone" of this Company "for 1916" were about "five millions of dollars." This interpretation of the official report is not surprising in view of certain statements that the Commissioner of the Cost of Living makes. The Commissioner is reported as saying that "There were two individual cases of profiteering in 1916 and that had these cases occurred since the passage of the cost of living Order-In-Council, he would consider it his duty to recommend that the facts be laid before the Attorney-General for consideration as to their criminality." The situation created by such erroneous and damaging statements is serious as emanating from a Government Official, from whom one looks for not only accurate statements but correct conclusions.

The William Davies Company, being a private concern, has followed the practice of all private corporations, except when it made a bond issue in 1911, in that it has not published reports of its assets and liabilities or profit and loss. The present circumstance, however, in which a Government Official has led the public to false conclusions, makes it advisable for this Company, for both the public interest and its own interest, to publish particulars of its business as well as point out the error of the statement of the Government Official.

For the last fiscal year ending March 27th, 1917, The William Davies Company bought and killed 1,043,000 head of Live Stock (Cattle, Hogs and Sheep). This, plus purchases of outside Meats, produced 160,000,000 pounds of Meats. The Company handled 6,550,000 pounds of Butter and Cheese, 5,650,000 dozens of Eggs, and manufactured 26,500,000 tins of Canned Goods.

The net profits on these were .68 cents (or two-thirds of a cent) per pound on meats, 1.04 cents on Butter and Cheese, 1.04 cents per dozen on Eggs, and .47 cents (or slightly less than one-half a cent) per tin on Canned Goods. These profits include profits on all By-Products derived from these accounts.

During the year the Company served at its retail stores 7,500,000 customers, the average purchase of each customer was 35c., and the net profit upon each sale was 5/8 of 1 cent.

The turnover of the Company from all its operations for the last fiscal year ending March 27th, 1917, was $40,000,000. The net percentage of profit upon this turnover, after deducting war tax, was 1.69 per cent., or including war tax 3.45 per cent.

The William Davies Company has assets of $13,385,000, of which $3,865,000 is tied up in fixed investments.

To provide the necessary facilities for the increased volume of business the Company expended $750,000 in buildings and equipment during the year.

Companies of other character present no more reasonable statement of profit and loss based upon the investments made in the business.

The William Davies Company offered to the Imperial authorities as well as to the War Office Service (which represents the Imperial authorities in Canada) to place the output of its Factory with respect to Bacon supplies, Canned Beef and Pork and Beans at the service of the authorities, on the basis of cost plus an agreed percentage. These offers were successively declined as the authorities evidently desired to purchase in the open market, and on this basis The William Davies Company has secured War Office business by open competition with the world.

Respecting the Report of the Commissioner on the Cost of Living:—

Last Winter the Commissioner, under authority of Order-in-Council, required packers to submit statements under oath for some years back and up to December 1st, 1916, of incoming stocks of meats and the cost of such, as well as statements of outgoing product and the selling value. This Company represented in writing at the time that the information as specifically required was not in accordance with Packing House Accounting methods, and invited the Commissioner to send an Officer to the Head Office of the Company to examine the books for any information desired, and to secure a viewpoint as to the best way of collecting data which would be of use to the Government. This offer was declined, and there was nothing to do but fill in the information required as literally as we could determine it. For example, there was no recognition of the fact that a raw product may enter a factory under a specific classification and leave the factory as a finished product under some other classification.

We submitted a series of accurate figures based upon our interpretation of the official requirements which made no provision for charges of any description other than incoming freight and unloading charges to be included in the cost or to be deducted from the selling price. There was nothing in the report which could be read so as to determine a profit and loss statement. The very fact that with only a statement based upon cost of raw products and value of sales in Great Britain a Government Official has deduced "Large margins," "Profiteering" and "Criminality" if it had occurred since the passage of a recent Act, shows too dangerous a trifling and incapacity to be permitted to deal with any important situation. The statements of this Company have been treated by the author of this report as if the outgoing product was identical with the incoming product, and from the series of reports he has singled out two items—the Bacon and Egg reports—and from them deduced an erroneous "margin"

Continued on Next Page

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which the newspapers have interpreted as "profit." The author of the inquiry shows a strange lack of even a fundamental knowledge of simple bookkeeping and a dangerous inability to co-ordinate figures. The following are specific and outstanding errors in the report:

The principal item that is causing excitement deals with cold storage Bacon. The term "cold-storage" is not defined, and the public is allowed to make its own definitions. As all Bacon in a packing house is under refrigeration it is really all cold-storage, and therefore this Company's figures of cold-storage Bacon represent the complete quantity of Bacon handled in its entire Plant, whether in freezers or in process of cure for immediate shipment. That some Companies interpreted cold-storage product as "freezer" product only is evidenced by the smallness or entire lack of figures on the Bacon list for some Plants, indicating that many Firms did not submit statements of their complete stocks, as did this Company. An Official of this Company pointed out this cold-storage distinction to Mr. O'Connor and Miss McKenna in Ottawa a few weeks ago, and the failure to make the distinction after having had it pointed out evidences lack of desire for accuracy of the real information desired.

It is true The William Davies Company, in 1916, exported 97,791,000 pounds of Bacon, but we do not know how the margin of 5.05 cents per pound is arrived at by Mr. O'Connor, as there were no figures to justify such a conclusion. The probabilities are that the margin is arrived at by taking the average cost per pound of incoming product from the average selling price per pound of outgoing product. This may be a rough way of estimating the gross margin when dealing with small figures, but when dealing with figures the size that Mr. O'Connor has to deal with, a very small fraction of a cent per pound of error makes a very important difference in the total, and one must be careful to make sure that the outgoing product is the same finished merchandise of the incoming product reported on.

Allowing it to pass, however, as a rough estimate, we wish to point out—(first)—the inquiry of the Commissioner allowed only for incoming freight and unloading charges, and made no provision whatsoever for operating charges of any kind, such as labor, curing materials, refrigeration, etcetera. Such actual charges on the 97,791,000 pounds exported were $1,162,000—or 1.2 cents per pound. This amount covered all charges up to the point of placing the Bacon on cars f.o.b. packing-house. In addition to this was the actual cost to land and sell this 97,791,000 pounds in England after leaving the packing house, which involved charges of 2.9 cents per pound—or $2,836,000. This 2.9 cents per pound included inland and ocean freight, landing charges, war and marine insurance, cables, and selling commission to agents. The ocean freight and war risk alone would make up 2.4 cents of the charge of 2.9 cents per pound. This 1.2 cents, plus 2.9 cents—a total of 4.1 cents—must be deducted from Mr. O'Connor's margin of 5.05 cents per pound, leaving a margin of .95 cents, or slightly less than a cent per pound, which still has to be reduced because of the error of premises and because of further factors which have to be considered to determine net profits.

It is quite evident some of the other packers did not show selling values in the country in which the goods were sold—a proceeding quite proper, as the forms submitted to be filled in were indefinite and ambiguous, thus permitting without charge of evasion a variety of interpretations as to the information required. It is thus possible that of all the figures submitted by the different packers that no two sets of costs and sales prices are determined at the same common point. It is this difference of interpretation of what was required that accounts for the difference of the alleged "margin" made by the different companies. Common conclusions, however, have been drawn by the author of the report from varying bases of premises.

The figures of the Egg business were submitted on the same basis as Bacon, and similar deductions must be made.

(Second)—The above margin is further reduced in that the author of this inquiry singled out the Bacon figures as an item in which the selling price shows an alleged improper advance over cost, but he did not give us credit for the statements of other products, of which figures were submitted, the selling prices of which were under cost. The reason of this was that, through failure to inquire, the Department entirely overlooked the fact that product may come in as pork, and, through the process of manufacture, go out as Bacon, or, in another instance, enter the factory as beef and go out in the form of canned meats; for example: much of the product which came in as pork, and which was entered on the pork sheet submitted to the Commissioner—about which he makes no mention—was cured and left the factory in the form of Bacon, and was, therefore, entered on the outgoing side of the Bacon sheet—the result is that the Bacon sales are increased by this amount over the incoming stocks of Bacon, and, likewise, the sheet showing sales of pork is reduced by the amount that went out in the form of Bacon. If the Department takes one set of figures that show favorably to the Company they should take another set of figures that show unfavorably, as the principle in either case is the same, and failure to do so looks as if the author of the report was exercising more enthusiasm than sound judgment in his investigations.

(Third)—It is queried in the report, that "if the margin of 3.47 cents," alleged to have been made in 1915, "was satisfactory, why was it necessary to show increased margin in 1916?" Assuming again for the moment the soundness of the premises in asking such a question based on an erroneous "margin," it will be found that the increased margin is chiefly absorbed in increased ocean freight rates and war risk insurance in 1916, of which apparently the author of the report was in ignorance.

The Company does not challenge either the legal or moral right of the Government to investigate business enterprises when public interest directs such an investigation should be made. If an investigation of the packing and meat business is ordered, the Company will place at the disposal of the Government not only the data it would be required to supply under Order-in-Council directing that inquiry be made, but will place the experience of its officers at the disposal of the investigating committee, if it is considered they can render any service which will be of value. The Company has not now—nor at any time during the fifty years of its operation—anything to conceal in method or practice of carrying on its business. It does, however, claim the right to conduct its export business without abusive comment from Government civil servants—especially when the conclusions drawn from the data asked for are improper and false.

One of Canada's chief export industries is the packing business. It is esential to the live stock industry, and, along with other export industries, it maintains the financial stability of this country and should, providing it is on a sound basis, receive encouragement and not slanderous abuse. In view of the publicity given to the report of the Commissioner on the cost of living, the Company demands the same publicity in having an official Government investigation of this report to determine the truthfulness or untruthfulness of its conclusions. We do not seek public consideration as a company, but we do say that untruthful official statements, or statements the effect of which is to create an untruth, adversely affect the live stock industry of this country, which is so valuable and essential a wealth-producing power, and, in the long run, are harmful to the very people that the statement seeks to benefit.

If the passing out of existence of a corporation such as The William Davies Company, or if nationalization of packing houses would materially and permanently reduce food prices, then in view of the present world tragedy it ought to be consummated without delay. The fact of the matter is, however, that with millions of people in Europe turning from producers into consumers because of war, and the tremendous destruction of food products incident to war, there is no remedy for the high prices of food while such conditions last, except the remedy of thrift and increase of production.

Long before there was talk of a Food ontroller in the United States or Canada The William Davies Company urged the Government at Ottawa, in writing, to appoint a Food Controller with full power to do what he saw fit, as we realized at that time the upward tendency in the price of food commodities unless checked by official effort. At the most a great deal cannot be done in reducing food prices while currency is inflated and until the scale of prices of all kinds of commodities declines also. What can be done can only be done by a Food Controller. We wish to point out that nothing at all can be accomplished unless the data secured are accurately and clearly made and the deductions therefrom sound. Only public harm arises from dangerous incompetency in the haphazard collection and careless use of important figures.

As far as The William Davies Company is concerned this terminates all public statements of the Company, and it will pay no more attenttion to speculative and haphazard statements made either by newspapers or civil servants. The only further statement that will be made will be at an official investigation.

E. C. FOX, General Manager

THE WILLIAM DAVIES COMPANY, LIMITED

Toronto, July 17, 1917.

Cut shows our lumber conveyor in use at R. Laidlaw & Co., west end plant

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128,350 Laths in 10 Hours

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We also make a full line of Lath-Mill and Picket-Mill Machinery for Mills, both large and small.

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Theo. A. Burrows, Grand View, Man.
Wm. Milne & Sons, North Bay, Ont.
C. Beck Mfg. Co., Penetanguishene, Ont.
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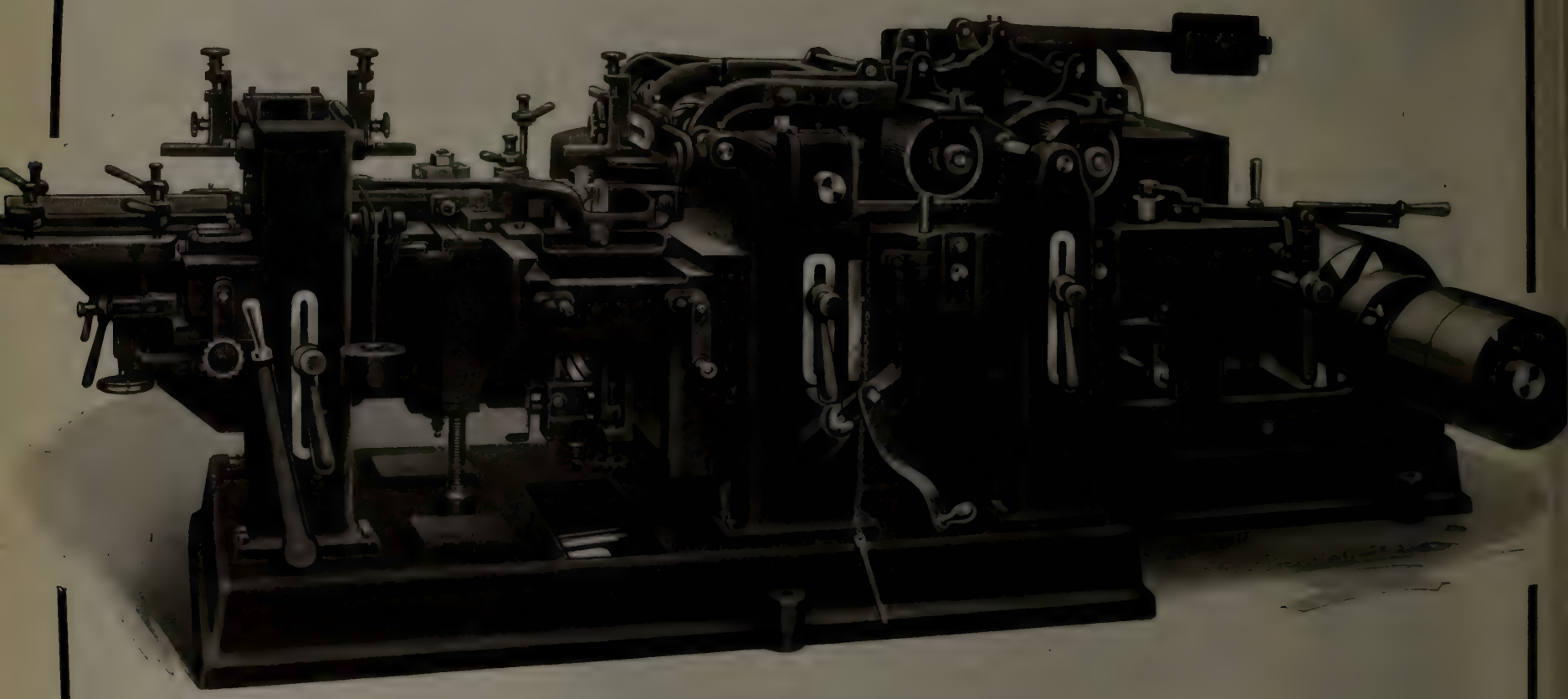

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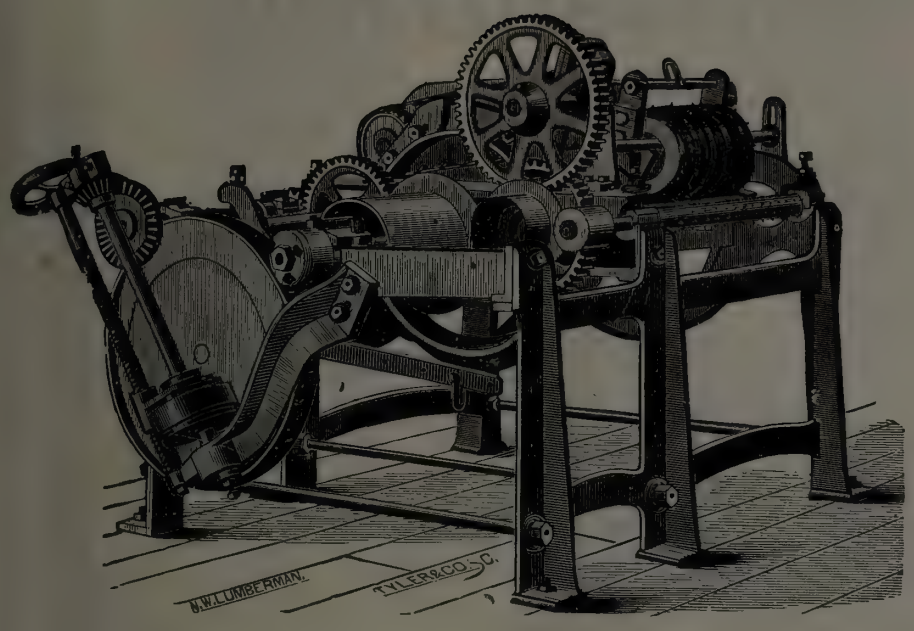

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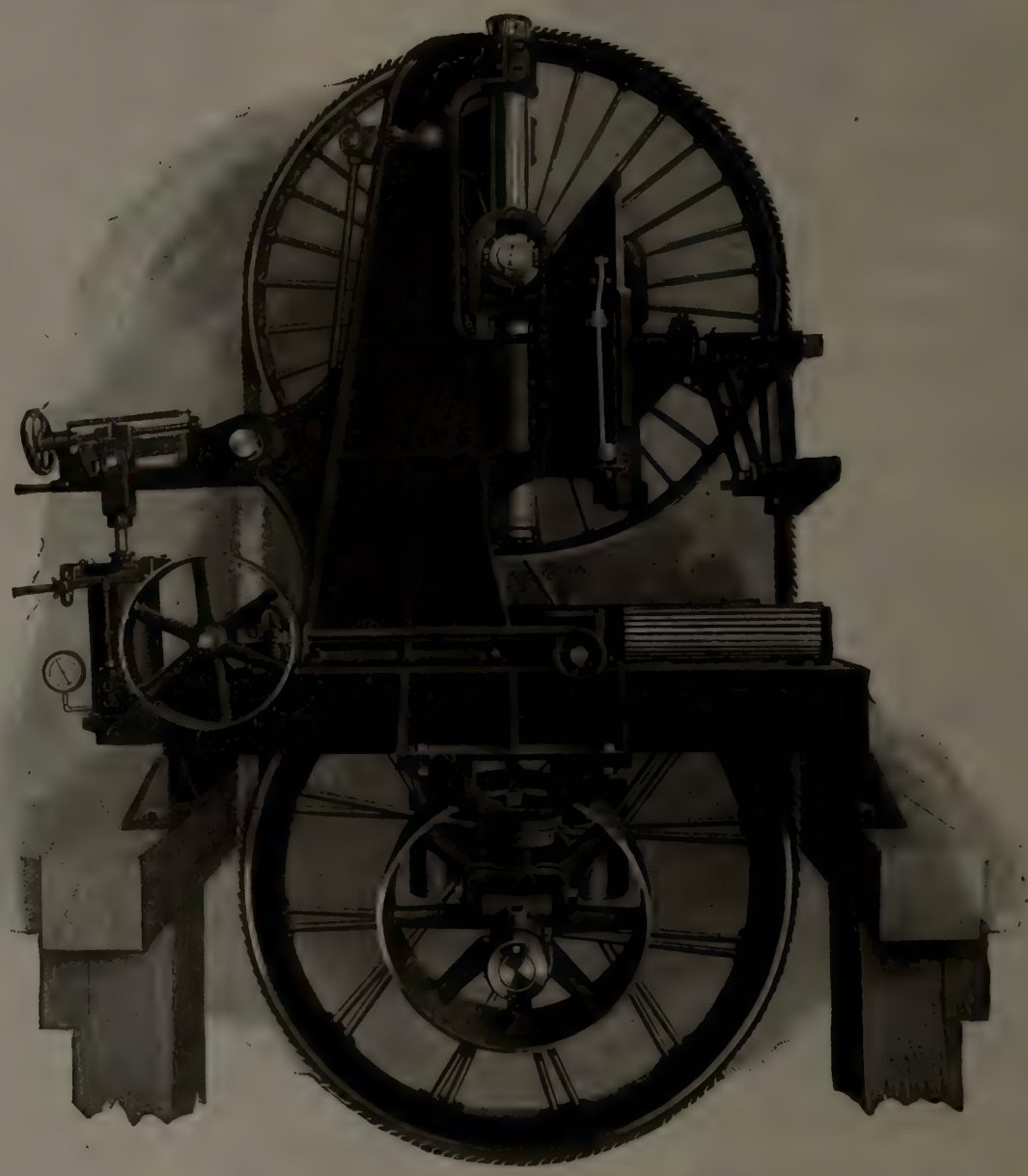

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(2) Unbreakable saw guide raised and lowered by steam—**first used on our machine.**
(3) Great saving in saws—actual tests have proven saws have a longer life on this machine.
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(6) Heavy, rigid, strong and accurately built throughout.
(7) Built by expert workmen in a plant that has been manufacturing high grade sawmill machinery for sixty years.

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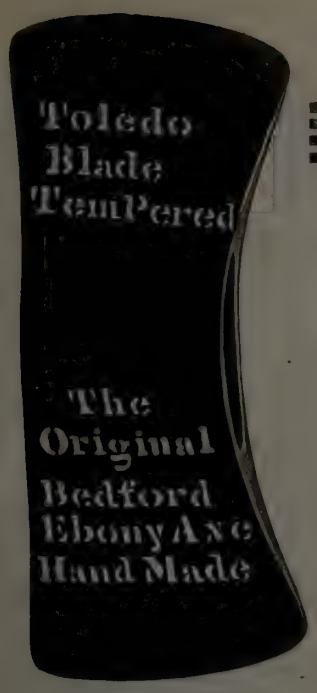

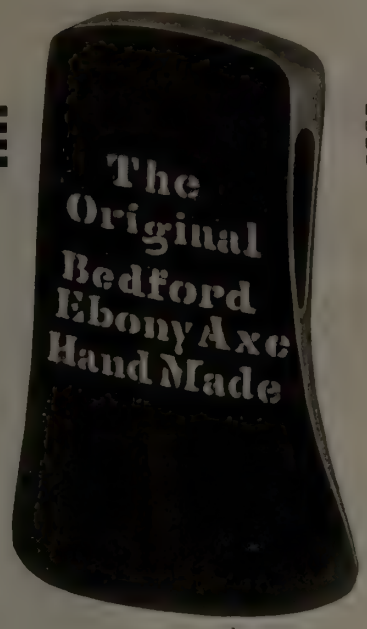

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THE Ebony Axe is a carefully made, hand forged tool for lumbermen. The Steel used is given a special temper, which makes it take and hold a keen, tough cutting edge.

Our other models "Bedford Crown Axe" and "Bedford Double Crescent Axe" are both made from special steel, and differ from the Ebony Axe in that they are not hand forged.

Prices and any particulars you may request will be cheerfully furnished.

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The Corbet Automatic Double Cylinder Steam Towing Machine

Made in four sizes, accommodating Flexible Steel Hawsers from ¾-in. dia. up to 1½-in. dia.

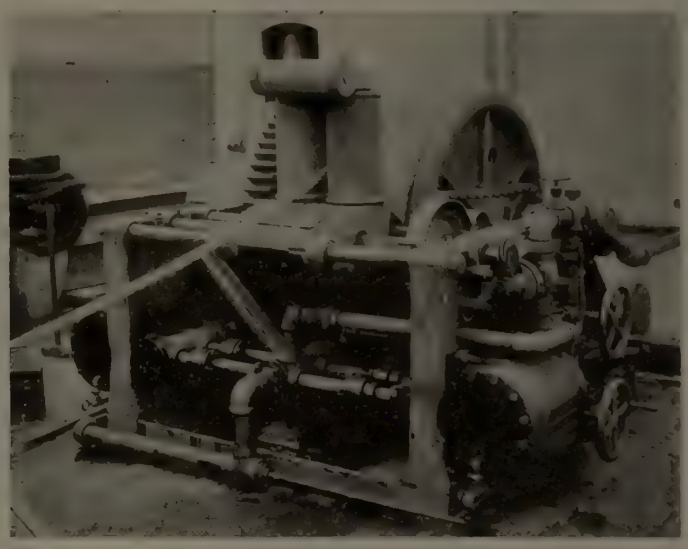
A large number of our machines are installed on Tugs on the Atlantic and Pacific Coasts and on the Great Lakes.

They increase the efficiency and earning power of the Tug.

Does away with having to buy new Manilla Towing Hawsers every spring.

The Steel Hawser will last at least 10 years.

Keeps the crew contented and gives perfect satisfaction.



Read what one of our Customers says.

"TESTIMONIAL"

THE MIDLAND TRANSPORTATION CO.,
Midland, Ontario.

Messrs. The Corbet Foundry and Machine Co., Ltd., Owen Sound, Ontario:

Dear Sirs,—I have pleasure in reporting to you that the No. 3 Automatic Steam Towing Machine, which has 1,350 ft. of 1¼-in. dia. Flexible Steel Hawser on it, which you installed on the tug "Lucknow" this spring, has been satisfactory in every way. The machine has sufficient power to haul the cable in at all times while the tug is working ahead. The Automatic Valve works well when in bad weather, and we find no jerk on the cable. This machine is a big improvement and safer than the Manilla line.

Yours truly,
THE MIDLAND TRANSPORTATION CO.,
Per Capt. E. F. Burke,
Pres. and Gen. Manager.

Write for prices and full information

The Corbet Foundry & Machine Company, Limited

Owen Sound - Ontario - Canada

Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.

Limited

General Mill Supplies MONTREAL

P H

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Canada's Standard

Quality all through

Made not just to sell, but to give

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The only ALL CANADIAN FILE

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PORT HOPE, ONT.

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How long will Consumers pay the increased cost of *Extravagant* Manufacturing?

Over $2,000,000 a week losses from inefficient power transmission alone

Are you guilty of extravagance in your plant?

Wastage of power in your saw mill spells less profit, with lower production. Conserve on your power transmission, and you have solved a great leakage in the effectiveness of your mill.

Inferior belts detract from the efficiency of your plant. Steel rails are expensive, yet imperative to every railway.

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Leviathan and Anaconda Belts are made to increase your production with least waste of power transmission.

They are a "saw mill" belt—made for your heavy drive—made to stand the ravages of time, moisture and acid fumes.

LEVIATHAN ELEVATING TRANSMITTING CONVEYING BELTING

Leviathan and Anaconda Belts are replacing more costly belts every day, and then outlasting them in actual length of satisfactory wear.

Conservation is our motto to-day—see that you are conserving on your power transmission. USE LEVIATHAN AND ANACONDA BELTS.

Ask to be put on our mailing list for our monthly booklet, full of live information on Belting.

Main Belting Co. of Canada

Limited

Montreal: 10½ St. Peter St. Toronto: 32 Front Street West Winnipeg: W. W. Hicks, 567 Banning St.
Calgary and Edmonton: Gorman, Clancey & Grindley, Edmonton

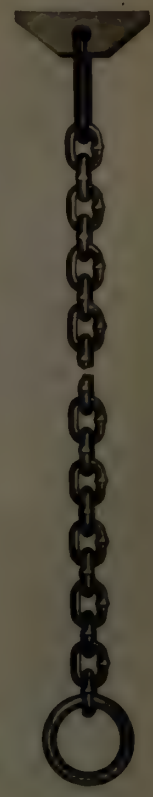
With Two Sheared Toggles

McKINNON ELECTRIC WELD

McKinnon Electric Weld

McKinnon Swell Weld

Design Patented



"Dreadnaught" Steel Loading Chain
B. B. Coil, Log, and Boom Chain

—Guarantee—

McKinnon Chain is guaranteed against defects in material or workmanship, and will be replaced free of charge if welds break before chain has stretched stiff.

Made in Canada

Made in Canada

5-16 in. Dreadnaught Steel Loading Chain, pulled to stock break at 9230 lbs. proving the weld the strongest part of the link. Tested at Syracuse University September 27, 1912

Made in Canada by

McKinnon Chain Co.

St. Catharines, Ont.

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Manufactured in Galt, Canada

We absolutely guarantee every Maple Leaf Saw. The fine Razor Steel used in all our saws is manufactured exclusively for us. Our secret tempering process refines and toughens the raw material to such an extent that Maple Leaf Saws will stand up under the most severe tests and last longer than any other saws on the market.

Write for our catalogue and prices

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Most of the Large Lumber Concerns Are

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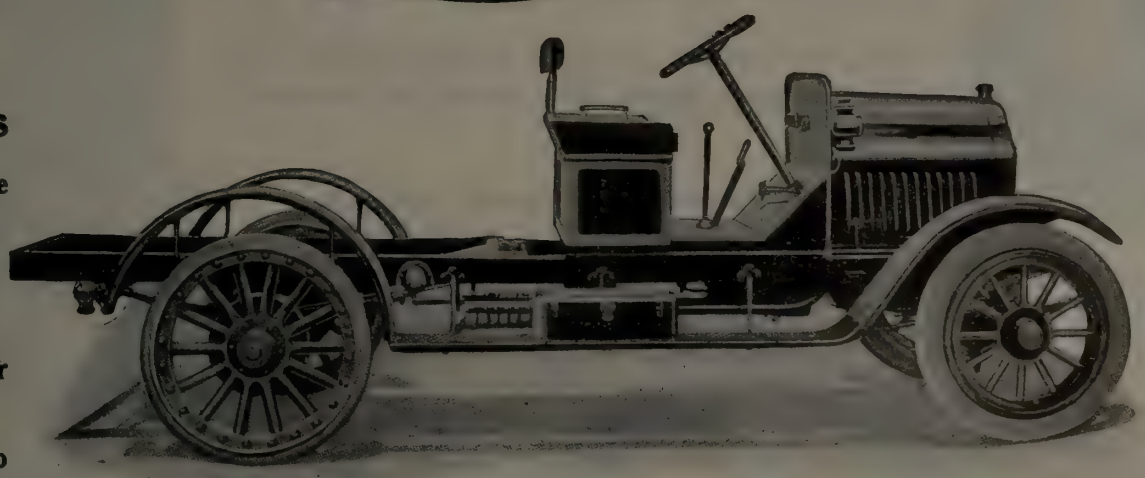

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"15"—1 ton Worm Drive

"16"—2 tons Worm Drive

"17"—3½ tons Worm Drive

"18"—5 tons Worm or Chain Drive to order

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THE LITTLE GIANT MOTOR TRUCK enables the retail lumber dealer to give his customers the very best of service, which is the big outstanding argument that interests the busy contractor. Other things being equal, the lumber dealer who can give the best service gets the most business.

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THE DUNTLEY Hydro-Pneumatic Gas Generator is an exclusive feature of Little Giant Motor Trucks. With this device the Little Giant Truck may be operated on a mixture of one-half kerosene and one-half gasoline, at a saving in fuel cost of over 50 per cent., with a total absence of carbon, smoke or odor.

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379 Craig Street West

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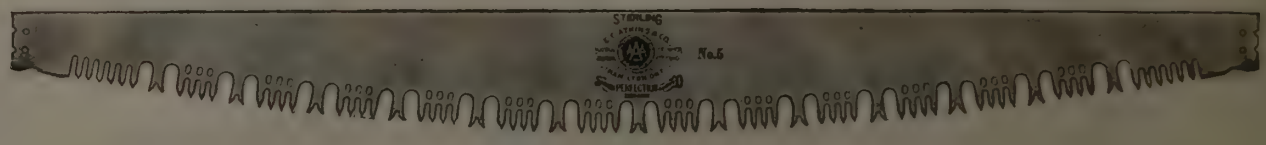
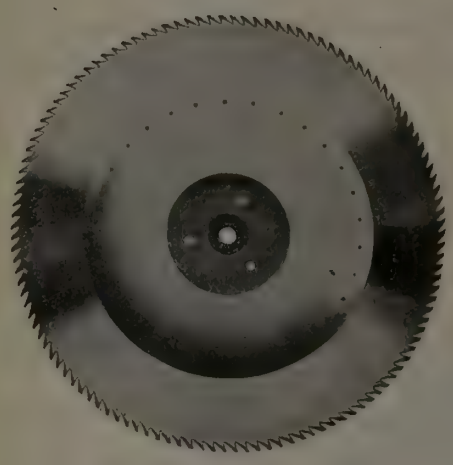
ATKINS

Sterling Quality Saws



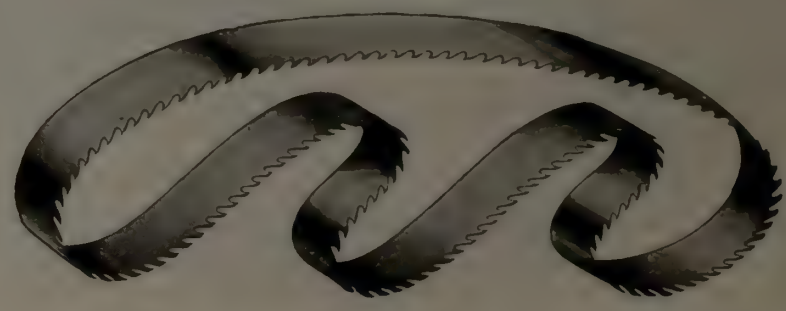


Assurance of the best results, both economic and productive, is found in the constant use of *Atkins Sterling Quality Saws.*

Steel of exceptional quality—that never varies—and the best workmanship has perfected these universally used Saws.

Are your results as good as they should be? Try ***Atkins Saws*** and watch the improvement.

Send for our "C.L." Catalog containing items of interest to you.



E. C. ATKINS & CO., Inc.

Established 1857

Makers of Sterling Quality Saws

Factory: Hamilton, Ont. ***Vancouver Branch: 109 Powell Street***

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HARRIS HEAVY PRESSURE BABBITT METAL ?

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We admit the disturbance in the planet Mars may not be due to efforts to discover the manufacturers of
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but we can certainly lay claim to the fact that it is a

Universal Favorite

There is no Babbitt Metal made which gives such excellent service.

HARRIS HEAVY PRESSURE BABBITT

DOES ITS DUTY WELL AND DOES IT CONTINUOUSLY

IT IS GUARANTEED TO GIVE EXCELLENT SERVICE IN ALL WOOD WORKING PLANTS

HARRIS HEAVY PRESSURE for all general machinery bearings has a marvellous record in all parts of the world for its

Dependability

That one word is a summary sufficient to satisfy the most discriminating user of babbitt metal. We manufacture all grades.

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The Canada Metal Company, Limited

MONTREAL HAMILTON **TORONTO** WINNIPEG VANCOUVER

The Baker Lumber Co. Ltd., Waldo, B. C.

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WATEROUS MACHINERY

You will find Waterous Equipment in those Canadian Mills where fast and accurate cutting are essentials.

Waterous Sawmill Machinery is being used because it is built for that kind of work,—it is the result of more than 50 years intimate knowledge of Canadian sawmilling conditions.—The men who use Waterous machinery know that it will give the service they expect.

Our reputation for "knowing how" is a guarantee that every piece of equipment you buy from our shops is the last word as regards Sawmill machinery. You can bank on the results it will give you.

There is a Waterous equipped mill in your neighborhood—we will be glad to tell you where. Watch our machines at work and ask the operator and the owners what they think of them—we will abide by what they tell you.

The Waterous Engine Works Co.
Limited
Brantford, Canada

Vancouver, B.C. **Winnipeg, Man.**

Everything for the Sawmill

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"NEW MODEL"

BAND MILLS

Built in 8, 9 and 10 ft. sizes, there's a Bandmill for every kind of work.

The spring-cushioned, all knife edged tension device is the most sensitive in use.

Upper and lower guides swing about the exact centre of the saw blade.

The Upper Guide is raised and lowered by steam, an easy, accurate and swift adjustment unequalled by any other.

Wheel raising device and tilting device are roller bearing. Operating mechanism is entirely enclosed in columns. Sawdust and slivers cannot reach it.

Massive design of the bed and columns precludes vibration during cutting. This mill is absolutely steady doing the heaviest work.

Every part of the mill is designed to make mill-wrighting easy. Adjustments and inspections can be made without difficulty.

Waterous Bandmills are designed and built in a plant that has specialized in the manufacture of Canadian sawmill machinery for more than 50 years. It counts.

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Any careful business man can see the value of using only the best grade of leather belting. Belting that has been made specially for the conditions in the mill. Saw and Planing Mills, Lumber Machinery of all kinds require leather for the best results.

Goodhue Belts

The green sawdust, moisture and oil have no effect on Goodhue Waterproof Leather Belting. We can point to satisfactory records in many large Lumber Plants and Woodworking Mills in all parts of Canada. In the Maritime Provinces, in Quebec and Ontario, and right on through to British Columbia, you'll see Goodhue Waterproof Leather Belts running year after year, with little or no attention. We make three brands, each the best in a special condition.

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Limited

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Test the balance of them. See how hard they are. Run your finger over the teeth and note their sharpness and regularity.

These qualities of the "Famous Five" Files were not arrived at by accident.

They are the result of expert knowledge of the exact needs of every trade. This knowledge has helped us to standardize the merits of "Famous Five" Files in the minds of every user.

Specify them when ordering.

They are:—

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Great Western

American

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Made in Canada by

FOR SALE

Standing Timber

in Large or Small Blocks

and

Sawmill Machinery

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Falconbridge and Street for small mills.

We have the following Sawmill Machinery For Sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.
1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.
1 Double cylinder steam nigger, right hand.
1 Log Loader for right hand mill.
1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.
1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.
1 left-hand steam nigger.
1 Log-loader.
1 Endless chain jack ladder with two kickers complete for right and left hand mills.
2 Roger Gang Edgers for 8-in. cants and lumber.
1 Waterous double edger, 6 saws.
1 2-saw Trimmer.
1 20-ft. Slash Table.
1 16-ft. Revolving Slash Table
1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.
1 Lath Mill with bolter.
2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.
1 Hand Machine for cut-off saws.

POWER PLANT

1 Double Duplex, high pressure Water Pump.
5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.
2 125 h.p. Water Wheels.
1 Upright Engine for sawdust conveyor.
1 10 h.p. Engine.
1 Wood Machine for 22-in. wood.
1 Edger for ripping dry lumber, installed.
1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co.
Limited

26 Ernest Ave.

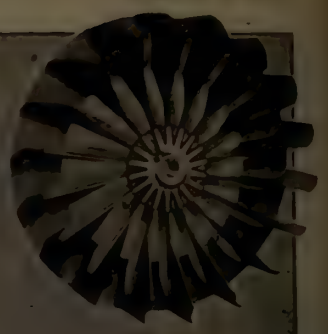
Toronto, Canada

Amherst Solid Shoes

For Lumbermen, Loggers, Miners and Farmers is our specialty. For 50 years we have been in the vanguard of progress in Solid footwear.

Amherst Boot & Shoe Co., Ltd.

AMHERST HALIFAX REGINA



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in use in thousands of lumber and woodworking plants all over the country. Many of our fans, made and installed 45 years ago, are still in operation. If you want satisfaction, you need Sturtevant Fans—they are cheapest in the end.

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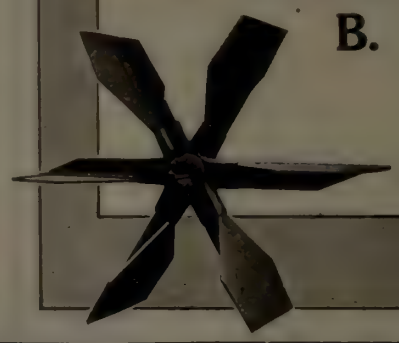

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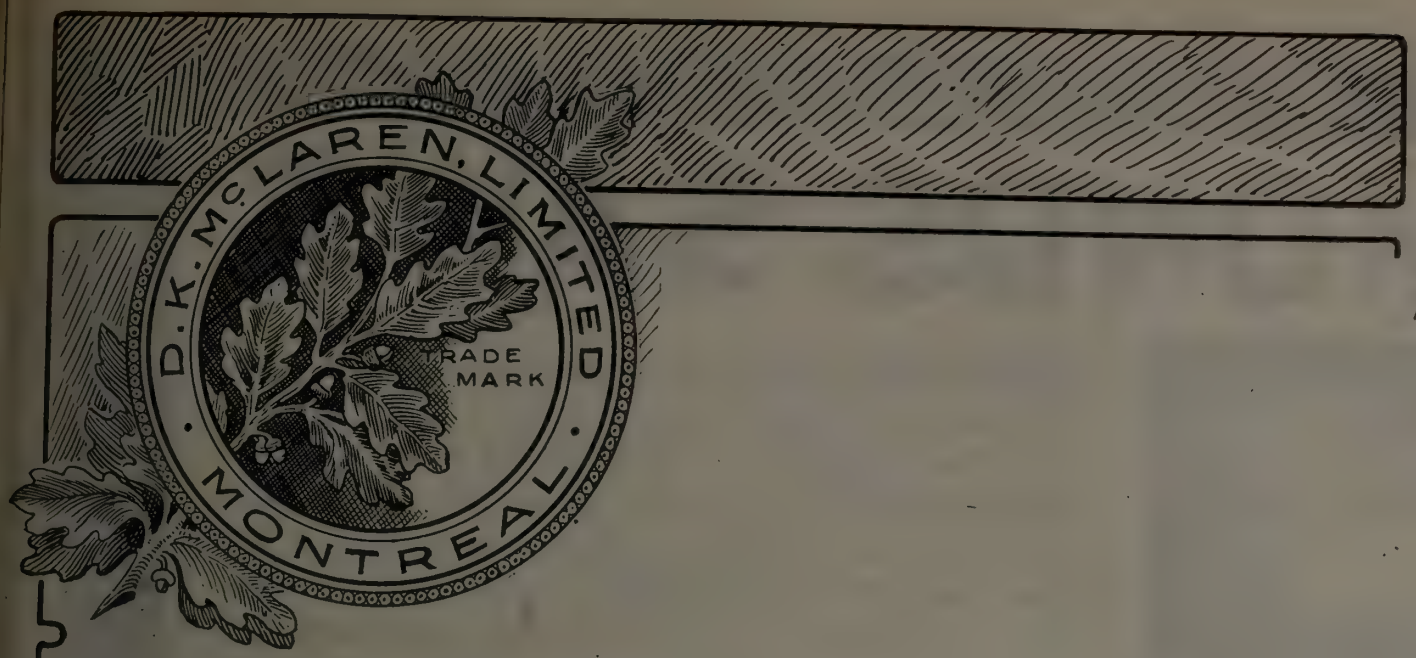
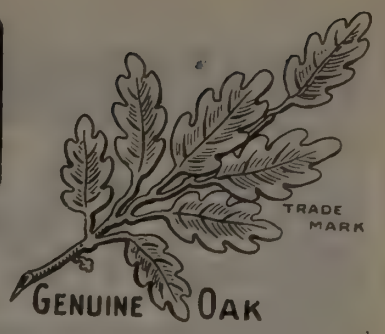
We are now sawing

2,500,000 Quebec Spruce heavily 16 ft. lengths.
1,000,000 Hemlock, running heavily, 18 to 30 ft. lengths.
2,000,000 Virgin White Pine, large growth.

Let us quote you on your Hardwood requirements or saw out your Softwood bills





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Special Belts for Special Drives

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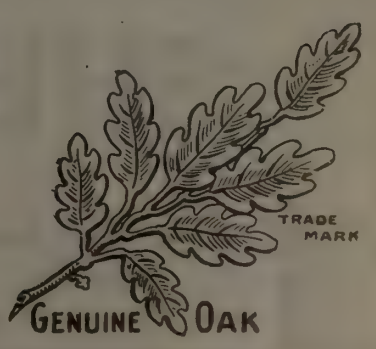

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PRACTICE Forest Conservation by making lumber with saws that do not waste stock—such saws as Simonds Band and Circular Saws. Holding their tension and standing up to the work as they do, they are free from running thick, or thin, or uneven lumber. When you use saws that tend to make more of your lumber grade higher, you will have fewer mill troubles.

Have you complete information about our Inserted Tooth Cut-off Saws?

Simonds Canada Saw Co., Limited

St. Remi St. and Acorn Ave.

MONTREAL - QUE.

Vancouver, B.C. St. John, N.B.

DOUBLE SLOW SPEED EXHAUSTER
Top Discharge

SHELDON
Slow Speed
EXHAUST FANS

Will remove the shavings from your machines quickly and keep the mill floor clean.

For Lowest Speeds, Lowest Power Consumption and Least Vibration, use Sheldon Slow Speed Exhaust Fans.

Write for prices and complete information on Exhaust Fans and Shavings Exhaust Systems.

SHELDONS LIMITED

Galt, Ontario, Canada

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Canada Lumberman and Wood-Worker

Issued on the 1st and 15th of every month by

HUGH C. MACLEAN, LIMITED, Publishers

HUGH C. MacLEAN, Winnipeg, President.
THOS. S. YOUNG, Toronto, General Manager.

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TERMS OF SUBSCRIPTION

Canada, United States and Great Britain, $2.00 per year, in advance; other foreign countries embraced in the General Postal Union, $3.00.
Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster-General for Canada, for transmission as second-class matter.
Entered as second-class matter July 18th, 1914, at the Postoffice at Buffalo, N.Y., under the Act of Congress of March 3, 1879.

Vol. 37 Toronto, August 1, 1917 No. 15

1917--Outstanding Features of the Year's Trade—1918

A year ago, when the logging season of 1916-17 was facing the lumber manufacturers of Canada, the "Camp Supply" number of the Canada Lumberman was published and the introductory article dealt with the situation as it then appeared, drawing from it such impresions as seemed reasonable regarding the year that was approaching. That year is now a matter of history and there are some in the lumber business who would care to see it repeated, although many have realized record prices for their stocks. It has been a year of difficulties and uncertainties and yet a year in which the lumber trade and industry have been able to settle down a little more firmly upon a sound and safe basis.

Two important facts stand out when we look back upon the year that has passed. The cost and the difficulty of producing, shipping and marketing lumber have increased greatly, and the prices of lumber have advanced considerably. Other things have occurred which have affected conditions in one part of the country or another, but everywhere these two things have been the chief developments of the year. Moreover, the same problems of operating cost and price of the finished product must continue to hold sway as the determining features in connection with the results to be secured during the logging season of 1917-18 and the manufacturing season of 1918. It is hard to imagine anything at present that is likely to reduce the high cost of labor and materials required in the woods, and it seems reasonable to expect that the prices of lumber during the rest of 1917 and during 1918 will continue high.

In eastern Canada the matter of chief importance to the trade has been the situation in Great Britain. The lumber industry in the Maritime Provinces and Quebec has been built up upon the British demand for its product. Early in the present year Great Britain appointed a Controller of Timber Supplies and placed embargoes upon the importation of timber which put an end to the shipment of stock from eastern Canada, on private account. Everything which went across was on Government account and even this was comparatively small in quantity. It is rather a grim feature of the situation that Great Britain's ability to get along without Canadian stocks was largely the result of the manufacturers of Canada permitting their industry to be crippled in order that Canadian woodsmen might be sent to England and France to cut down home grown timber and convert it into such sizes and lengths as are required in France for the carrying on of the war. The Canadian lumberman has patriotically stood aside under these uncomfortable conditions, permitting himself to be crippled in his operations at home while his market abroad has been closed to him. This has been going on for some months, but lately there have been signs, that before long, the British Government would see its way clear to reducing the stringency of its embargo. The embargo upon shipments from Scandinavia was removed a short time ago and a cable received from Great Britain under date of July 21 states that Canadian shipments will now be permitted to enter England as deck cargoes, without licenses, and that the price restrictions of January 31 will not apply to stock imported from Canada after July 19.

Had it not been for this welcome piece of news it would not have been possible, in this issue of the Canada Uumberman, to refer to anything except a continuation of the difficulties surrounding the trade during the past year, especially during the first six and a half months of 1917. The news of the removal of the British embargo, however, gives a completely different appearance to the whole situation. It may not be wise to become too optimistic simply because of this change. There may still be trouble ahead for the timber exporters of eastern Canada, but undoubtedly the one thing for which everyone has prayed during the past five and a half months has taken place, and, great as its importance is, its significance may be even greater.

This issue of the Canada Lumberman is, to a considerable extent, different from any that have preceded it. Features are emphasized which have not been emphasized formerly. This is the result of the changed conditions under which the industry and trade are now being conducted. The most significant of these changes in eastern Canada is the awakening among retail lumbermen to the importance and the necessity of co-operation. A great movement has got under way among eastern retailers which promises to produce important results in the immediate future. This development, and others of significance are dwelt upon more fully elsewhere in this issue.

It is interesting here to recall the closing words of the introduction to the "Camp Supply" number of last year, which are borne out by the contents of this year's Annual Number, namely, that "Even this time-honored industry, in which methods have long ago reached a considerable degree of standardization, is continually developing new lines that result in important progress."

Progress of the Retail Association Movement in Ontario

The proposal to form an Ontario Retail Lumber Dealers' Association has passed safely through the preliminary stage and reached the goal of practical certainty. Those who have been promoting the idea have given it a great deal of study and have evolved a plan which gives fine promise of being successful from the first. The approval which this plan is finding in all quarters may be ascribed chiefly to the fact that the retail lumber situation in Ontario is ripe for just such a development, and to the further fact that the plan has been worked out so successfully elsewhere as to remove any doubt regarding its benefits and its feasibility.

Taking advantage of the lessons of the past and the examples of successful organizations of to-day, those who are responsible for the present plan have decided upon a number of important features that will commend themselves fully to the trade. The first matter that had to be settled was the arrangement of the association work and this presented quite a problem, but one which has been solved in a happy manner. The great size of the province of Ontario and the wide diversity of local interests which it includes rendered it doubtful whether anything in the nature of an Ontario Association of retail lumber dealers could be formed which would not suffer, and possibly fail, on account of these diversities. Such a large association, it was thought, might not be able to deal intelligently or quickly with local matters and for this reason might not hold the interest and loyalty of its members. A solution of this difficulty has been found in a division of the work, so that local interest may be maintained and local affairs given their full share of attention by those chiefly interested in them, namely the local dealers themselves, and so that the larger problems and work of co-operation, may be carried on by a central organization in which all the retailers of the province will have an interest. With this idea as a working basis it has been decided to form a small number of local associations, five in all, and an Ontario asociation with headquarters at Toronto. This plan, and the way in which it will be worked out, has been explained in the Canada Lumberman in previous issues. Its adoption has done more than anything else to secure the interest of the retail trade throughout the province and it will probably be found to present a good foundation for organizing co-operative efforts among the trade.

The aggressive retailers who have been responsible for developing this plan and working it out have already proved their fitness for work in this field. They have organized and put into operation one of the most complete local retail lumber dealers' associations in existence, the Southwestern Ontario Retail Lumber Dealers' Association. To them is due the credit for this movement, and the retailers of Ontario, in general, owe them much for their unselfish work.

Necessarily, in connection with such a movement, the originators are limited in what they can do. About all they can accomplish is to map out the work and call organization meetings. The greater part of the details can only be worked out after the organizations have been completed. In the present instance, however, much of this work has already been clearly indicated by associations which are in existence elsewhere and one of their most important ideas has been adopted in advance by the promoters of the Ontario organization. This feature is a retail lumbermen's training course, for which arrangements have been made with the Western Retail Lumbermen's Association. The intention is that this course shall be sent to members who join the Ontario Association before September 1. It has been necessary to fix a definite date for this purpose, so that the heavy mailing work involved may be systematized.

The above outline covers such progress as has been made up to date. The next thing to be done is to call meetings in the chief local districts, as soon as a sufficient number of members have joined the movement. These associations will elect officers and representatives to the Ontario Association and a meeting of this association will be held as soon as possible, in order to get its work under way.

In order to bring this organization into being, those who have been active in the movement are sending to Ontario retailers a full explanation and blank application forms for membership. These applications are to be signed and sent to The Canada Lumberman, 347 Adelaide Street West, Toronto. It is quite possible that some retailers will have been omitted in connection with the circular, on account of the difficulty in compiling a complete list. The intention has been to reach everyone, but if someone has been missed, a letter to the Canada Lumberman will immediately bring him full particulars, and enable him to join the movement from its inception.

The Minimum Carload Situation

The appearance of a number of lumbermen recently before the Board of Railway Commissioners for Canada at Ottawa, when a hearing was given to their representations against the increased minimum freight rates upon lumber recently imposed by Canadian railway companies, did not achieve a definite result so far as any declaration by the Board is concerned, but it is believed that the representatives who had charge of the lumbermen's case made a strong enough impression on the Board to persuade them of the necessity of going into the matter very fully before granting to the railway companies the right to make their increased charges permanent. Lumber shipers have no desire whatever to escape or to shirk their share of the burdens placed upon them today. Their patriotic course in connection with all matters relating to the war has been clearly enough demonstrated to need no argument and it is not possible to imagine that, in opposing increased minimum charges, they are seeking anything to which they do not believe they are entitled. In fact, it is difficult to see how, even the railway companies themselves can claim that the increases are in any way justifiable.

Taking the matter upon its simplest basis, that of the physical impossibility of including in a freight car, in many cases, the weight which the new regulations say shall be considered a minimum, the lumbermen's case is clear. On account of the peculiar nature of lumber it is physically impossible to put into a 36 ft. car, for instance, any quantity of lumber of such a size as 16 ft. which will fill the car's cubical contents. The wide variety of sizes produced and required by the trade present an almost equally wide series of difficulties for the shipper who wants to put into a car the greatest quantity of lumber that it will contain.

Under these conditions the minimum weight—which is presumably calculated upon the cubical contents—cannot be loaded in a great many cases, and it follows that the lumberman who makes such a shipment has to pay to the railway company an excess amount of freight charge for which the railway performs no service. In a nutshell, this is the whole situation, and all that the railway companies were able to say in upholding their case was of a theoretical nature, based upon the scarcity of cars and

No one will contradict the railway companies in connection with their claim that freight cars must be loaded as full as possible under present conditions. Unfortunately these conditions seem likely to last indefinitely, but lumbermen today are doing everything possible to load their cars with all they will hold, and to do their loading and unloading promptly so that cars may not be kept idle longer than is necessary. Wholesale lumbermen, for instance, are sending to the mills, in all their letters, a notice to the effect that cars must be loaded to capacity, and wherever it is possible for the mills to do so they are even going out of their way to comply with this requirement.

Under these conditions there was really only one logical thing for the Board of Railway Commissioners to do, when they found a strong conflict of opinion between the railway companies and the lumber shippers, and that was to make enquiries for themselves upon the spot. A suggestion to this effect was made to the Board by Mr. A. E. Eckardt, representing the Lumbermen's Section of the Toronto Board of

Trade, and the impression given by the Board, by the manner in which it received this suggestion was that it would act upon it. Lumbermen will be ready to abide by any regulation which the Board may make after it has studied the situation at first hand in this way. Its representatives, when they visit a number of important lumber shipping points, will see that the cars are being filled to capacity and that the weights shown are frequently below the minimum now required. A report by the Board's officers after making such an investigation, cannot do anything but uphold the facts as they have been pointed out by the lumbermen, and the members of the Board will then be able to approach the matter with a far more definite understanding of its details. What the lumbermen are seeking is simply that a set of minimum weights shall be established under which they will not be called upon to pay for services that are not rendered. Under the old minimum weights, there was little or no complaining. Occasionally it was not possible to fill a car so that it would contain the full weight required, but on the whole the situation was a fair one and a return to it will do no one an injustice.

Standardizing Aircraft Timber Specifications

A conference on aircraft spruce specifications was held at Washington, D.C., recently. Those taking part included spokesmen for the Pacific Coast and Carolina spruce interests and representatives of the aviation section of the signal corps, the aircraft production board, the British, French and Italian missions now in this country, the lumber committee and various American airplane manufacturers.

Among the purposes of the conference were to make the spruce manufactures thoroughly familiar with the quantity and character of the requirements which the nations fighting Germany will need during the coming year; to arrange for standard specifications for sawing the spruce for all four of the nations represented; eliminating the waste and confusion which now arise from improper sawing; and to discuss arrangements for a proper coordination of purchasing to prevent competitive bidding for the lumber which all countries need alike.

It was pointed out that the average airplane needs less than 200 feet of spruce for its construction, while a thousand feet have to be allowed for the job under present conditions. It is hoped that through this personal conference between men familiar with the needs of the airplane factories and the spruce manufacturers a satisfactory common agreement on sets of standard specifications for the mechines now in use can be worked out through which the lumber as it comes from the mills will more nearly approximate the form required for the finished product.

The recommendations of both the foreign and American experts were presented to the conference and the co-operation of the manufacturers will be sought in putting them into effect. Particular emphasis was laid on the importance of cutting down the amount of raw material needed for each airplane because of the necessity of economy in shipping space for that sent abroad.

It is now accepted as settled that there will not be real difficulty about drying green spruce by the kiln process. Twenty experts have been at work at the Madison (Wis.) laboratory for weeks, some of them for two months and more, conducting experiments along this line, and also making tests of wood for propellers for airplanes. The net result of the tests is the conviction that spruce dried in kilns under a process requiring three weeks is superior to airdried spruce for the manufacture of airplanes.

These experiments have eliminated the fear that the United States and the Allies might find themselves short of spruce dried in the air and be unable to carry forward the big airplane program.

The possibility of using eastern and southern spruce for Pacific coast spruce has not been overlooked. The accessibility of spruce on the west Coast and the large size of the timbers naturally make it the preferred material. Spruce in the east and south is much smaller, although some of it is of excellent quality. For the most part, the small parts of airplanes which could be manufactured from lumber cut from small trees can be tuned out of the material left over after the big west Coast spruce tree has been run through the mill for the larger stuff. It is not believed, therefore, that eastern and southern spruce will be largely utilized in pushing forward the aviation program.

It is estimated that the United States and the Allies together will require about 75,000,000 feet of spruce during the next twelve months. The Allies last year imported 26,000,000 feet of Pacific Coast spruce and this year they are taking more than 32,000,000 feet. Howard E. Coffin and other members of the aircraft board hope that a considerable saving may be made on the aggregate quantity of lumber used. This is believed to be doubly important because of the necessity for mobilizing the industry in order to insure a supply of material.

Editorial Short Lengths

Official announcement of the safe arrival in England of the ten portable sawmill units contributed for war service by New England lumbermen has been made at Ottawa by the Canadian Government through the chief press censor's office. The American lumbering battalion sailed from a port of eastern Canada in the latter part of June. They left Boston on June 15 and were given a most enthusiastic send-off by their friends, leading lumbermen who aided in raising the units and by many prominent citizens and public men. With the woodsmen on the British transports when they sailed from a Canadian port were 4,700 Canadian troops, including a Canadian forestry draft.

According to dispatches received from London, the complete equipment of the sawmill units caused much surprise in England and occasioned a great deal of favorable comment. The woodsmen had with them not only the necessary machinery, but were fully equipped in every way, even to lubricating oils. Their arrival found them ready to establish their sawmills in British woodlands and to begin work at once.

In no individual instance has the helpful activity of the United States been better illustrated than in this extension of assistance to the British Government in the solution of the serious problems involved in providing the timber supply for the British forces in France. The response to the English need was given with a swiftness and efficiency characteristic of the American forester and lumberman. No time was wasted and there was no lost motion in achieving tangible results. The whole proposition was worked out within twenty-four hours of the receipt of news that England would welcome such assistance, and the machinery was working smoothly to make the contribution immediately effective.

President A. H. Smith, of the Michigan Central Railway, has issued a circular to officers and agents, containing suggestions made by the advisory railway committee, working under the direction of the Council of National Defence, in order to secure greater efforts towards efficiency. The suggestions are that both company freight and commercial freight be loaded and unloaded more promptly, and that cars be loaded heavier as a war measure. With regard to the first suggestion, it is pointed out that there are from 250,000 to 300,000 points in the United States and Canada where freight is received and delivered, and a slight improvement at each would make an astounding aggregate. Prompt handling of cars by shippers and receivers is also urged.

Mill Employees in B.C. on Strike

Serious Labor Disturbance, Started in Washington, Closes Down Many B.C. Plants

The strike of employees in shingle and lumber mills in the State of Washington has reached British Columbia mills, and the effect has already been serious. An eastern Canada wholesaler has received from a shingle manufacturer in British Columbia a letter outlining the situation in the following words:—

"As you have probably learned, the employees connected with the shingle mills in the State of Washington declared a strike to become effective on July 16. On that day a number of the crews in the various mills throughout the State commenced to walk out and between 90 and 95 per cent. of the shingle mills were closed down. This also spread to the sawmills and to the logging camps, so that the majority of the men employed in these branches of the lumber industry have walked out.

"On July 15th the white men connected with the shingle industry in British Columbia had a mass meeting at New Westminster which was addressed by a leader of the Union in the State of Washington, and they decided to go out on strike on July 23rd. When July 23rd came along only three or four of the shingle mills in British Columbia were unable to operate, but before noon of the day enough men had walked out to close down between one-half and two-thirds of the mills and by the middle, or the end of the week, we are certain that all mills will be down. One of our mills did not start on July 23. One ceased operationg at noon of that day. The other closed down at the end of the day, so we are closed down tight.

"How long this strike is going to last no one is in a position to say, but we have talked with a number of lumbermen from the State of Washington and they feel that it is certain to last from a month to two months. We hope that they are wrong, but that remains to be seen. What the men ask for is eight hours work instead of ten hours; but ten hours pay for eight hours work, and this means a straight increase of 20 per cent., which is more than the mills can stand. Moreover, if the mills operated under such terms their output would also be reduced by 20 per cent. Therefore, in view of the above and the entire situation, all business has ceased with us, all prices are cancelled and we cannot accept any orders."

Mr. J. J. Donovan, vice-president of the Bloedel Donovan Lumber Mills, referring to the situation, says:—"Local millmen have resolved unanimously to resist the eight-hour day even to the point of closing every plant operated by the 100 or more concerns that have organized to meet the employees' impractical demands. . . . . I feel certain that the German Government is paying some of the agitators for their activities. Employees are drawing higher wages—wages that net them more money after paying for their necessities even at the increased prices—than at any other time in history. They have no real grievance against the millmen. Our company has voluntarily raised wages three times during the year and have granted bonuses to those who remain with us. We met a payroll of $118,000 last month and would regret exceedingly to be compelled to close our plants, but we can not shorten hours and raise wages any further and operate. . . .

"This is not merely a labor trouble. It is a conspiracy against the government in the guise of labor's demands. It is directed largely at the concerns that are engaged in supplying the metals required for the army, the foodstuffs which must be produced in unusual quantities to further the allied cause and the lumber for the ships, cantonments and other necessary government works. We believe the Federal authorities will have to take the question in hand very soon, but whether or not it does the leading lumbermen and shingle manufacturers will not be coerced at this time by I. W. W.'s or by paid agents of the German propaganda in the United States. That is certain. If it is to be a strike it will be futile. If a walkout, it will be more serious for the community than the public can now realize, for it will virtually paralyze the business of the State. We have met the labor situation with high wages, as high as can be paid. We can not operate an eight-hour day. That is decided and it is final."

Bulletin Concerning Ash

The United States Forest Service has published bulletin 523 by W. D. Sterrett, "Utilization of Ash." It is a pamphlet of fifty pages, filled with information relating to the supply and utilization of this valuable wood. Particular attention is given to various uses, and the list of such uses includes over 300 articles made of ash. The bulletin contains much historical and statistical information which should prove valuable to the manufacturer and users of ash.

British Embargo Restrictions Reduced

A cable despatch from London, England, under date of July 21, states that the British Board of Trade has announced that the restrictions on the importation of timber from Canada have been relaxed, allowing timber imports from Canada as deck cargoes, without licenses. The price restrictions of January 31 have also been removed, and are not to apply to timber imported from Canada after July 19. Canadian exporters have already received enquiries from English firms, indicating that there will immediately be a good demand for any stock that can be shipped. The only information at present available is that contained in the cable, but it is presumed that a fairly extensive quantity of timber will go forward in deck cargoes, and that the Admiralty will, to a considerable extent, control the selection of stock for export. Present space rates are about 350s. per standard.

In the House of Commons on July 18, Sir John Flemming asked the president of the Board of Trade to relax the regulations prohibiting the import of Canadian timber and to allocate space in requisitioned vessels. He also asked that importers of Canadian timber be granted liberty to increase January prices. Mr. Roberts, in reply, said that the controller of timber had been trying to reduce the restrictions on Canadian timber, but tonnage difficulties had delayed the matter. Import licenses are now obtainable for shipment in neutral vessels from Canada, but such are not possible for steamers. He hoped to arrange the increase in January prices shortly.

New England Railroads Revise Embargoes on Lumber

Embargoes against lumber shipments on New England railroads and connecting lines from the south and west have been revised within the last few days, but the movement of lumber is still considerably restricted. Lumber for export at any eastern port will be accepted only upon receipt of satisfactory evidence that the necessary vessel space has been contracted for and that the car will be unloaded promptly upon arrival at the destination. Northern and eastern lumber loaded to full carrying capacity of the car is being moved over the Boston & Maine Railroad to local points, but the company is cautious about granting permits for shipments to southern New England and New York points by way of the New York, New Haven and Hartford and Boston & Albany railroads, or their connections, unless strongly assured that the car will be unloaded and released promptly.

Lumber is being accepted by the New York, New Haven & Hartford Railroad at its Harlem River and Maybrook Junction, N. Y., gateways only for a limited number of designated New England and New York points and only when the car is loaded to full marked or practical loading capacity. Similar restrictions are placed by this road upon lumber shipments coming from the New York Central Railroad.

Rail transportation east of the Hudson River and north of New York City is largely controlled by action of the New York, New Haven & Hartford Railroad and this road is still having much trouble resulting from the heavy volume of freight offered and lack of sufficient cars.

Enormous Increase in Prices of Pulp and Paper

Few commodities of commerce are recording such remarkable advances in price in Great Britain as pulpwood and paper.

The following statistics, covering the first five months of the present year and the corresponding period of 1915, illustrate the advance in prices:—

	1915 Quantity	Five months. Value
Total imports of chemical wood-pulp . . .	89,332 ton.	$4,000,000
	1917 Quantity	Five months. Value
Total imports of chemical wood-pulp . . .	63,690 ton.	$12,115,000
	1915 Quantity	Five months. Value
Total imports of paper (including boxes and cartons of paper and cardboard)	4,234,945 cwt.	$11,500,000
	1917 Quantity	Five months. Value
Total imports of paper (including boxes and cartons of paper and cardboard)	1,264,638 cwt.	$7,900,000

Government Likely to Take Over Railroads

The latest despatches from Ottawa indicate that the Government is likely to take over the control of the Canadian Northern and Grand Trunk Railways, at least during the war. A government caucus recently discussed the matter, but gave out no report. A. W. Smithers, chairman of the Board of Directors of the Grand Trunk Railway, had a long interview with the Prime Minister on July 26th, and Sir Wm. MacKenzie and Z. A. Lash, of the Canadian Northern were also in Ottawa on business, presumed to have connection with this matter.

Quebec's Exports Increased

Advance of Nearly 45 per cent. in Value—Wood and Its Manufactures the Chief Products—Details of Trade

The trend of exports to the United States from the Quebec Consular District continued upward in 1916. Values of all articles shipped totalled $16,264,382, as against $11,233,409 in 1915, an increase of nearly 45 per cent. as compared with a gain of 10 per cent. in the preceding twelve months.

With the exception of $2,074,136, all articles exported in 1916 were wood and manufactures of wood, and these attained the splendid aggregate of $14,190,246 as compared with $9,615,336 in 1915, a gain of more than 47 per cent. The accompanying table sets forth in detail comparisons of the several articles for 1915 and 1916.

An examination of this table shows the most notable individual advance to be in news print paper, which added 41,888,663 pounds in quantity of material and $1,100,718 in value of its former record. New high levels were also set for all classes of wood pulp and, collectively, they represent an augmentation of 83,624,522 pounds in quantity and $2,314,679 in value. The movement of the sulphite unbleached variety was nothing short of spectacular; the gain here was 28,869,067 pounds or 887 per cent.

Gains of greater or less importance are revealed in every item of the table except wrapping paper. This declined from 9,365,083 pounds in 1915 to 2,015,733 pounds in 1916, but in the face of such favorable results elsewhere the setback makes no impression on general results. Then, too, the more important sales of woodpulp and pulpwood were doubtless influenced favorably by obstacles that depressed the manufactured product, for it is probable that the poor showing for wrapping paper is due to increased price and consequent higher customs duty in the United States.

Lumber, including laths, shingles, ties and posts, was exported to a value of $1,821,064 which is 50 per cent. more than the same articles netted in 1915. The rough product represents $1,482,375 of the total money value and was responsible for 80 per cent. of the increase in this division.

Study of the figures herein impresses one with the immense value of forests to the province of Quebec. Through active methods of harvest and manufacture they have become powerful magnets to draw wealth into local coffers from foreign pockets. Certainly much of the prosperity of the province in normal times will depend upon the ability of local shippers to continue shipping their wood and manufactures of wood to the markets of the world in competition with other producing countries.

Table of Exports to the United States

Articles	Unit of Quantity	1915 Quantities	1915 Values	1916 Quantities	1916 Values
Paper and mnfrs. of:					
Boxboard	lbs.	.....	.....	124,040	2,359
Printing (news)	lbs.	170,963,066	3,291,185	212,851,729	4,391,903
Pulpboard	lbs.	101,899	2,054	347,563	7,686
Sheathing paper	lbs.	537,356	10,257	.....	.....
Wrapping paper	lbs.	9,365,083	285,805	2,015,733	84,171
Roofing felt	lbs.	.....	.....	995,894	34,643
Other	.....	.....	2,510	.....	.....
Wood and manufactures of:					
Pulpwood, rough	Cords	97,482	560,456	119,803	709,939
Pulpwood, peeled	Cords	114,963	797,976	180,282	1,261,808
Pulpwood, rossed	Cords	49,012	410,701	59,422	520,085
Lumber, rough	M. ft.	52,908	994,594	80,897	1,482,375
Lumber, planed	M. ft.	6,108	117,991	10,814	218,061
Laths	M.	32,429	90,254	37,798	102,225
Shingles, other than white pine	M.	.....	.....	1,527	5,511
Ties and posts (rwy.)	No.	17,212	9,644	21,027	12,892
Woodpulp:					
Mechanically ground	lbs.	124,589,835	951,897	162,155,441	1,807,395
Sulphate (unbleached)	lbs.	113,238,117	2,041,085	130,427,966	2,741,230
Sulphite (unbleached)	lbs.	3,251,168	48,927	32,120,235	807,963
Total			$ 9,615,336		$14,190,246
Total of all exports			$11,233,409		$16,264,382

Minimum Weight Case Before Railway Board

The increase in minimum car load weights imposed by Canadian railways were considered by the Board of Railway Commissioners for Canada at a hearing in Ottawa on July 17th. In addition to the representatives of the railways, there were present a number of lumbermen, including Mr. A. E. Eckardt, representing the Lumbermen's Section of the Toronto Board of Trade; Mr. Arthur H. Campbell, representing the Montreal lumbermen; Mr. Frank Hawkins, Secretary of the Canadian Lumbermen's Association, and Mr. T. Marshall, of the Toronto Board of Trade. The objections to the increased minima were explained in detail by the lumbermen. Briefly, these objections are covered by a resolution which had been passed at a previous meeting of the Lumbermen's Section of the Toronto Board of Trade, which was as follows:—

Whereas, the increased minimum carload weights for lumber are such that in many cases a car loaded to capacity will weigh much less than the minimum, thus permitting the railways to collect a large amount of money for which they have rendered no service, and

Whereas, frequently the railways are unable to furnish the class of car desired, but send instead a car or cars that are of a larger class than is necessary, thus imposing an additionally high minimum weight charge upon the shipper and,

Whereas, the charge should be only for the actual weight when a car is loaded to its full practicable capacity and,

Whereas, owing to the fact that lumber is sawn into certain standard lengths and that no practical combination of lengths will allow of a car being loaded to its actual cubic capacity, thus making it manifestly unjust to demand that the weight of a carload of lumber shall correspond to the marked cubic capacity and,

Whereas, under the abnormal conditions of to-day's market green lumber is being shipped, and a return to normal conditions of dry lumber will seriously aggravate the injustice,

Therefore, be it resolved that the Lumbermen's Section of the Toronto Board of Trade urge upon the Board of Railway Commissioners for Canada the unfairness of the increases, and request that the Board order the railway companies to return to the charges formerly in use.

The railroad companies confined themselves to a discussion of the subject largely from a theoretical point of view, not being able to combat the definite and actual cases, many of which were presented by the lumbermen, showing the impossibility of loading cars to the minimum capacities, now required. The lumbermen admitted readily, the necessity for loading cars to their full visible capacity, but presented a large number of instances in which, on account of the different lengths of lumber loaded, it was not in any way possible to fill the cars to the minimum weight required.

The representatives of the railroads and the lumbermen were not able to agree in regard to the situation. Many tentative suggestions were presented by the Board, but were not of a kind to meet with approval by both sides.

Finally, Mr. A. E. Eckardt, for the lumbermen, suggested that the Board should send out representatives to a number of lumber shipping points and have them actually inspect and report upon the results of shipments taking place. Mr. Eckardt said that with this information before them, the Board would be in a position to issue an order regarding minimum weights, and that the lumbermen would be prepared to accept such an order.

While the Board did not give an undertaking to adopt this course, it appealed to them strongly, and at the conclusion of the hearing, the Board decided to postpone the consideration of the subject for the time being; the belief of those present being that Mr. Eckardt's proposal will be carried out.

The lumbermen were fairly well pleased with the outcome of the hearing, feeling that the Board recognized their case as practical and unanswerable, and believing that the result will be a reduction in the minimum weights now in force.

St. John Shipbuilders Busy

R. E. Armstrong, Secretary of the St. John, N.B., Board of Trade, in a letter to the press says:—The semi-centennial of Confederation finds St. John engaged in the construction of a fleet of wooden steamers to relieve the necessities of the Motherland. Grant & Horne have contracted with the Imperial Munitions Board to build two steamers of a cargo carrying capacity of 3,000 tons. These will be constructed in a shipyard that was famous in the days of wooden ships for the magnificent vessels it turned out, but which has been silent like all the other shipyards in this locality for thirty years or more.

Two other firms are arranging to build wooden ships immediately, with the expectation of later on becoming steel ship plants. These are the St. John Shipbuilding Company, and D. A. Saker, an English builder. The latter has bought the Warner Mill property fronting on the main harbor for that purpose. He will put down three ships at once.

St. John was the home of wooden ships from 1770 to 1884. In 1876, the year preceding the great fire, this port stood fourth in the list of great shipping ports of the world, having 805 ships on the register, aggregating 280,073 tons, the revival of wooden shipbuilding, after all the old builders had passed away and all the old shipyards had been dismantled, marks an epoch of great importance in the history of the city.

Ontario Retail Lumbermen Organizing

Good Progress Made in Working Out Arrangements for Local and Central Associations—Details of the Plan and of the Local Divisions

It ain't the guns or armament,
Nor funds that they can pay,
But the CLOSE CO-OPERATION
That MAKES them win the day.

It ain't the individuals,
Nor the army as a whole,
But the everlastin' TEAM WORK
Of EVERY bloomin' soul.

Rudyard Kipling.

THE committee of the South Western Ontario Retail Lumber Dealers' Association, which was appointed recently to promote the formation of other local associations of retail lumber dealers throughout the rest of the province of Ontario, together with a central association having headquarters at Toronto, has been allowing no grass to grow beneath its feet. A great deal of study has been given to the situation during the past two or three months, and the scheme of operation has now been crystalized fairly definitely.

The executive of the South Western Ontario Association held a meeting at Chatham on July 16th, and formally endorsed a proposition to affiliate with the Ontario Association. When the work of organization has been completed in connection with the Ontario Association, the members of the South Western Association will be asked by their executive to pay whatever fees are decided upon. The executive has also appointed a committee consisting of the president, Mr. Chas. Hubbell; the secretary, Mr. B. F. Clarke, and Mr. J. C. Scofield, to attend the joint meeting of representatives of all associations for the formation of the Ontario association, when the meeting is called. Thus the South Western Association has placed itself in full accord with the proposals that have already been worked out, and has taken the necessary steps to do its share in the general organization work.

The South Western Association has been one of the chief moving forces in connection with this proposal and it is due to their enthusiastic support that the plan has made such promising headway. They may quite properly be considered the parent organization of the whole scheme, having formed their own association several years ago, carried on their local work successfully, and, in an unselfish spirit, devoted much of their time and thought to the spread of the movement, so that other retailers throughout Ontario may benefit by the advantages of co-operation.

Subdivision Into Local Associations

While the proposal and its objects have been outlined in the Canada Lumberman in previous issues, the progress that has been made during the past few weeks justifies a further reference to the subject and an explanation of some of its details. The accompanying map of Ontario shows how it is intended to subdivide the province into sections, each of which will have its local association. These subdivisions have been worked out by those who are interesting themselves in the plan, but, of course, are not to be considered as final. Various local considerations may be found to make some changes necessary, but in a general way it is probable that this division of the province into five sections is fairly close to the most satisfactory arrangement that can be made. The present South Western Association will be known as the Southern Association, and will cover the province from Windsor to London, between Lake Erie and the north boundary of the County of Huron. The Western Association will take in from Ingersoll to Burlington, and from Georgian Bay to Lake Erie. The Central Association will cover from Oakville to Belleville and from Lake Ontario northward, to include Simcoe County and Haliburton County. The Eastern Association will cover the rest of Ontario eastward from Napanee and northward to Pembroke. The Northern Section will be that portion of Ontario north and west of the other sections. The present proposal is to have the headquarters of the local associations at Windsor, Hamilton, Toronto, Ottawa and Sudbury.

Retail Lumber Training Course

Special arrangements have recently been made with the Western Retail Lumber Dealers' Association which will enable the new organization to start its usefulness on an extended scale, immediately the plan has been put into operation. A "Retail Lumber Training Course" which is of much practical value to retailers will be a feature

Proposed division of Ontario into five sections for Retail Lumbermen's Associations.

of the association service. Each member who joins the Ontario Association now will receive this complete service. This course has been enthusiastically subscribed for by the members of the Retail Lumbermen's Association of New York and other states. It is a unique publication, prepared by practical retail lumbermen, using the services of experts in each line.

It has not yet been possible to arrive at any certain estimate of the expenses of an organization of this nature, but it is believed that for preliminary purposes a membership fee of $15 each will be found sufficient. It is proposed, therefore, at present, that each member joining the Ontario Retail Lumbermen's Association shall pay $15 for the first year's fees, this to include the "Retail Lumber Training Course," which is in fourteen instalments. September 1 is the date upon which it is hoped to have the organization in a sufficiently advanced stage to warrant sending out the first instalment of the course, and all members whose dues are paid prior to that date will be entitled to receive it.

Meeting To Be Called Soon

A circular letter and full details of the plan are being sent to Ontario retailers, and from the replies already received it appears that the whole proposal is meeting with general approval. As soon as a reasonable number of applications have been received it is intended to call a meeting in each district for the election of officers and committees.

It will be seen from this summary of the work already done that the plan is now well advanced and that in a few weeks the movement promises to be in actual operation. The enthusiasm of all who have been approached is so remarkable that success seems to be assured.

Under the plan that has been worked out the local associations will be able to attend to such matters of mutual interest to their members as are of a local nature, and the Ontario Association will look after the larger matters that are of mutual interest to members in different associations. These larger questions are of a wide scope, including legislation, advertising, plan book service, lumber training course, insurance, unethical shipments, standardizing of cost accounting, etc. There is, in fact, a very extensive field of activity both for the Ontario Association and for the local associations, and it is expected that in a short time the association will have become thoroughly representative of the extensive retail trade of the province. It will be of the greatest importance, however, that the retail lumber trade should take this movement up with enthusiasm. The formation of associations is not a matter simply of holding a few meetings and electing officers. Success depends upon the extent to which the members interest themselves in the work. A body of officers, however capable and energetic they may be, can be of little use to an association unless they are backed up by an active membership, who devote as much of their time and thought as possible to furthering its objects.

The opinions of a number of readers of the Canada Lumberman upon this subject have already been published in previous issues, showing that there is general approval of the proposed plan. A few more letters received recently from retailers in Ontario enforce the approval of the others. Extracts from some of these letters are as follows:—

Matters That Need Association Attention

Editor, Canada Lumberman:— Hamilton, Ont.

The present condition of the lumber market emphasizes the need of co-operation amongst retailers, and shows up many weak points in our present methods of doing business. The price of lumber is being advanced beyond all precedent and without a word of warning from the producers, and retailers with contracts on hand are awakening to the fact that what were apparently good safe propositions are now very undesirable.

A provincial association of retailers could remedy these conditions to a large extent, and have some say in the cost of the material they buy. As it is at present they have no say either in the matter of price or grading. The sawmill man makes the grade to suit his ideas and the class of log he manufactures. It is the same with regard to trimming. If he thinks there is something to be saved by producing odd lengths then the odd lengths are made, and the retailer will either be compelled to go to the extra expense of separating them, or make up his mind to make a present of the odd foot to his customer. Another matter that concerted action on the part of the retailer would bring about is the standardizing of thicknesses and the adoption of a universal tongue and groove for all milled stock, so that the product of two different planing mills will fit together and it will not be necessary, as at present, to keep them separate.

With regard to the matter of prices, we do not know of any commodity that requires more careful and intelligent consideration. So many factors enter into this department of the business that there is a great opportunity for a wide difference of opinion, and a general discussion of these different factors will do more to educate the trade than any other method.

Then again, we have our troubles with transportation, the intricacies of the lien law, the extension of credits to contractors, and the matter of trade discounts.

These and a dozen others are matters which would be ever so much improved by a careful consideration by good representatives from the retail trade.—Thos. Patterson.

Greatly Needed by the Trade

Editor, Canada Lumberman:— Brantford, Ont.

If there is any business in Ontario that needs an association such as suggested in the Canada Lumberman under date of July 1, 1917, it is the retail lumber business of Ontario. We think it the right plan to have a central association which naturally should be located at Toronto, and the province divided up into districts to suit the dealers. We have every confidence that once this association is organized, any dealer who cannot see his way to go in on the start, will be only too anxious to get in the organization after he sees the benefits derived from it.

We trust that you will favor us with advice of any further movements in this matter, as we wish to help it all we can.—Mickle, Dyment & Son.

A Great Benefit to the Industry

Editor Canada Lumberman:— Sarnia, Ont.

We are strongly in favor of "collective thinking" on the part of the lumbermen of Ontario. The lumber business has been conducted in too much of a haphazard happy-go-lucky way, and it is just in the past few years that the lumberman has realized that it was necessary to specialize and study his business as carefully as the manufacturer, wholesaler or retailer of any other commodity. Following this along a little further, it leads to the necessity of frequent meetings of the lumbermen in order to obtain the benefit of one another's views on the situation, and strong organizations in charge of broad fair-minded men would be a great benefit to the industry in general.—R. Laidlaw Lumber Company, Chester H. Belton.

Could Handle Insurance of Members

Editor Canada Lumberman:— Thamesville, Ont.

I have delayed somewhat in answering your letter because I have had the idea of fire insurance in connection with our association. I mentioned this at a meeting nearly four years ago, but some of our members thought it was too large an undertaking. I have since learned that the Canners' Association carry their own insurance, and I have learned from a member of that association that it is very satisfactory. It costs them about 1½ per cent. for their insurance. Of course, planing mills would have to be struck at a higher rate. I strongly approve of the idea of a central association, in which each local association would be represented.—Charles Hubbell.

Heartily in Accord

Editor Canada Lumberman:— Comber, Ont.

I am heartily in accord with your views in regard to forming local retail lumber dealers' associations in every part of Ontario with a central organization where all the local associations would be represented. Such organizations would, in my opinion, be beneficial to the trade in general.—John Goatbe.

Would Draw the Trade Together

Editor Canada Lumberman:— Georgetown, Ont.

I think the proposal to form district retail lumber and building supply dealer associations a good one. The fact that this would draw together a body of men who have the same interests and difficulties to talk over and discuss would make the association of mutual advantage and well repay the dealer for the time spent in attending meetings of the association. I would join and take an active interest in getting other dealers to join. Wishing success to the plan—J. B. Mackenzie.

Will Co-operate Readily

Editor Canada Lumberman: Tweed, Ont.

We will be glad to co-operate in any reasonable way we can in the organization of an Ontario Retail Lumbermen's Association.—The Houston Co., Ltd.

E. A. Sterling Joins James D. Lacey & Company

The resignation of E. A. Sterling as manager of the Trade Extension Department of the National Lumber Manufacturers' Association, which was submitted to the directors at the meeting on June 20, in Washington, D.C., has been accepted by Acting President R. B. Goodman. This follows the return of Mr. R. S. Kellogg to Chicago, July 1, and his relieving Mr. Sterling of the duties of Acting Secretary which he had performed during Mr. Kellogg's absence in Washington as Secretary of the Lumber Committee. Mr. Sterling left Chicago on July 7, and with Mrs. Sterling drove east in his automobile to his home in Brooklyn, Susquehanna County, Pa., where he spent several weeks. Preliminary announcement is also made of Mr. Sterling's new connections, to the effect that he will be manager of the new Eastern office of James D. Lacey & Company. Offices have already been rented in the 42nd Street Building, New York City, and will be opened on or about August 1. In connection with his new work Mr. Sterling will also take up some of his former consulting practice as part of the activities of James D. Lacey & Company's new Eastern office.

Retail Lumber Associations—Their Field

What They Mean to The Members—Their Signifigance as Part of the Revolution in Modern Merchandising Methods

By W. D. Galvin, Hon. Pres. of the Western Retail Lumbermen's Association, Winnipeg

I HAVE been wondering what the "Retailers' Association" means to the average member. Does it stand for something coherent and definite? Does it represent ideas quite desirable and attainable because of their compatibility with the changing order of things? If this is not the idea of each individual member, then he must be reborn in his relation to association work and progress. The average dealer will admit that the association is a good thing. He joins, pays his dues, goes to the annual convention and hears a few suggestions which he agrees could be worked out to the benefit of his particular line of business. Two days later he is again working in his office, without the thought having occurred to him that he should be a live, integral factor in bringing to pass the very things that he knows in his own mind should be done. Another year rolls around, and the process is repeated. In association work there are too many Micawbers always "waiting for something to turn up," and, in this particular activity, always willing that the other fellow should perform the work of turning things up. I believe that this is a fair statement of what actually occurs within the membership of the average association. To many members, the convention is the association. Too often the average speakers and subjects talked of at these conventions may be likened to "dead ones carrying news from the grave." I believe that if it were possible to do away with the large convention, it would be a good thing—if for no other reason than to convince the membership of its insignificant contribution to association work. It must be admitted that the convention is necessary, at least for the completion of the organization, the general discussion of objects to be attained and its solidifying effect upon the membership; but, if larger things are not being done throughout the year, the mere "convention" is a meaningless thing. The average convention is bizarre, lacking, as a rule, in any definite purpose, and breathing an atmosphere of musty conservatism. It is little surprising, therefore, that association work is too often non-productive, since it has generally relied upon an annual convention to do something within a brief space of two days, and to regard that as the only work of the year.

The history of industry the world over—up to ten years ago—shows that the changes in processes have been slow. In fact, they were evolutionary in nature rather than revolutionary. We have, however, during the past decade, witnessed extreme changes in the manner of doing business, and we shall, in the next ten years, see a still greater transformation. So radical have been these changes, and so great will they become, due to public demand, legislation and diversity of individual requirement, that processes of operation in modern industrialism have been—and are being—revolutionized, the evolutionary spirit having become intolerable to a highly strung public nervous system. The old order of things in the retail lumber business fought persistently to regain its hold, but the shackles of worn-out methods are now in the process of being thrown off by the retail lumbermen themselves, and barely in the nick of time to save the business from passing into the hands of a new school of merchandising. This statement is made—not in the belief that such a danger is already passed—but with the object of pointing out some of the essential measures necessary to obviate such a result; and further, to emphasize the fact that we are at the dawn of a new era of merchandising, and that, if the retailing of lumber is to remain in the hands of those who have handled it, systematic organization and unification through the association is necessary. (The methods of the retail dealer must be constructive and progressive to hold his position, and he who denies that the change is in process will be swept off his bearings so completely as to be unable to get a safe footing in the new order of things, should he endeavor to hang to the fogyism of the past.

The Public Now on Top

The present administrators of the Western Retail Lumbermen's Association have endeavored to awaken within the membership a proper interpretation of the signs of the times, and have urged as essential factors, organization and co-operation on the part of all dealers, as a means of promoting better methods of doing business and thereby rendering better public service. The community rightfully demands adequate public service from any class of dealers, and more particularly from those who handle a commodity of universal necessity. In the days of P. T. Barnum, the public may have enjoyed the sensation of being fooled. In the days of Jay Gould, it may have been possible in the handling of a large trust to say: "The public be damned." The sun has set on those days, however, and the public is now too wise either to be fooled or to be damned; and if the public is not measured out that to which it is entitled, agitation will soon result in establishing a new medium of service, and those who have failed will no longer be allowed to serve.

Space will not permit more than a brief summary of the things that might be said, and the things that each retailer should know, concerning the importance of accomplishing this programme of organization and co-operation, but I believe that this idea embraces the sum total of what must be done in order to maintain the business of the retail lumber industry within the hands in which it now rests.

During the first few months of 1915, a most encouraging indication that retail dealers were alive to the necessity of further organization was found in the fact that the membership of the Western Retail Lumbermen's Association increased very materially; but as there were still a large number of dealers who had not allied themselves with the association, it was evident that there were yet many who did not realize the value of being united. The old saying that "Competition is the life of trade" is insufficient and must include the broader statement that, through organization lies the development of industry, provided, of course, such organization be carried on within proper and prescribed limitations of the law.

Constructive Association Work

Before the end of 1915 the association undertook work of real and constructive value to its members. Of this work, mention must primarily be made of the architectural department, which was established as one of the features of the association. As a result of this department, a book was turned out offering plans which, for practicability, attractiveness of design and economy of construction, would hardly be equalled by any other plan book issued in the Canadian West. The management of the association issued a book which met with the requirements of the consuming public. This work has been actuated by the desire to render a public service which the retailers themselves have long neglected, namely: that of helping the customer to buy the finished product in the way of a house, barn or whatever he may desire rather than mere boards, shiplap, dimension, or flooring. I believe that such a work, on the part of the retailers, stands for efficiency in the business, and efficiency is, undoubtedly, the guide to all business success. This work was gotten out under the direction of a trained corps of architects, with the supervision of the secretary of the association, assisted by a committee having practical knowledge of western building requirements. This committee was composed of Mr. George Robertson and Mr. Charles E. Lee. Every retailer admitted his indebtedness to the untiring efforts of all those who contributed to the success of this work. This is one feature of a progressive campaign for better retailing which the Western association is promoting. It will be interesting, and no doubt add to its value, when it is known that the work in connection with the farm buildings was under the supervision of Mr. Robert Milne, of the Manitoba Agricultural College. A permanent association architectural department is now maintained by the association where the needs of the consumer in the country and small towns may be served at a nominal cost through the local dealer.

Activities of a varied nature, too numerous to dwell upon in any detail, are receiving careful attention from time to time, as the occasion requires. These include negotiations with the railroads respecting amendments and revision of rates, questions before the railway commission, and the inauguration of a lost and found debtors' department, the latter proving of especial value to the dealers. Other activities of the association have become well known to the dealers through the bulletin issued, all of which will become of ever-increasing value as the membership grows and as funds are thereby supplied for doing more extensive work.

Scrutinize Legislative Changes

Another feature of interest is the attention which has been directed toward obtaining laws which are fair and equitable to the business man. As an organization representing large investments, it is right that it should vigorously assert the opinion of its members, from time to time, upon existing laws and prospective laws before the legislature. If certain laws are good, why should we not voice the thoughts of fifteen hundred dealers who occupy positions of influence in the

various communities of the West in advocating such measures? If laws already in existence are bad; should we not be as active in getting them repealed? Timidity on the part of those affected often results in law-makers being dictators rather than servants of the public. The officers of the association can guarantee fair consideration upon the part of law-makers to any subjects which are of common interest to business men in general, providing individual dealers have sufficient interest to join the association, and by so doing, make their affiliation felt. A result of such activity by a united membership should, in itself, be enough to induce every dealer to help maintain an organization worth while. If any "doubting Thomas," casting his eyes over these lines, puts them down as empty statements, let him first write to the association, in order to be informed of what has already been done, before he allows his incredulity to pass this subject by as worthless. Let him reflect for a moment also upon the fact that in each province a legislative committee composed of competent men is being appointed, whose purpose and object is to devote careful study to the effect upon our business activity of existing laws, and to scrutinize prospective bills, which may be introduced from time to time, and which may have an important bearing upon our business activities. This idea should appeal to those genuinely concerned in seeing the interests of the retailer safeguarded and when the possibilities of what may be accomplished are known, "those who came to scoff will remain to pray."

It is obvious that in any general scheme of organization, co-operation of membership from within is essential. Any discussion of this point is needless, and in touching upon the subject of co-operation, I shall only refer to the desirability of this relation between the retailer and the wholesaler, or between the two distinct branches of the one industry. It is not within the province of this article to say what the manufacturers should do. The thought suggests itself, however, that much can be done by a strong "Retail Association" lending mutual support to the work of the wholesalers in a nation-wide effort toward educating the public to greater uses of lumber.

Lumber manufacturers have been too busy erecting capacity record mills and acquiring stumpage to give sufficient thought to better ways and means of marketing their product. The thought, apparently, has not taken deep hold that to ninety-five per cent. of the consuming public the property and uses of Douglas fir, for instance, as a finishing product, are things little thought about. If the men into whose hands this species of timber has passed have not seen fit to exploit the various uses to which it may be placed, little wonder that the world has taken scant notice of it. The same criticism applies to the neglect in advertising the merits of other woods. As is often pointed out, the lumber industry differs from others only in the fact that the article which it handles reaches the ultimate consumer in the form of raw material. While the promoters of wood substitutes are waging a consistent campaign through attractive advertising, the manufacturers and retailers of lumber have, up to the present time, done nothing to counteract the progress which they have made by any effort to acquaint the public with the superiority of wood.

Lumber in Need of Publicity

Permanent public exhibitions should be installed in rural centres, towns and cities, adequately displaying the uses of various woods, the superior points of construction and the susceptibility of these various woods to beautiful finish; altogether acquainting the public with infinitely greater uses of lumber than are now known to the average man. This would go far toward correcting many fallacies which have been forced upon the public respecting the use of wood substitutes. Such a scheme contemplates the co-operation of lumber associations, provincial governments and Dominion forestry departments, the effect of which would be far reaching—both upon the retailer and the wholesaler of lumber. From the fact that during the present period little building is being done, such a plan may appear untimely. However, that condition applies only temporarily, and such a scheme of co-operation at the present is most appropriate, the idea being that when the building propaganda is resumed, the public may be better educated to the general utility and attractiveness of lumber construction. Such an educational campaign has been too long delayed and as a consequence the manufacturer has lost markets which should be his, and the retailer—his logical customer.

While the retailer is offering designs for more practical and more attractive building, what is the manufacturer going to do to help the retailer educate the public to greater uses of lumber? Surely here is food for thought, and opportunity for profitable co-operation.

Co-operation in Its Widest Sense

Nor is this the only plan of co-operative intercourse for the good of the industry to which the retailers' and manufacturers' associations may properly turn their attention. When economic abuses arise, to what extent may government be asked to solve the problems? This is a much mooted question. The tendency of governments, during late years, has been to deal with business enterprises along harsh and critical lines, tending in some countries almost to persecution. The rights of business have often been minimized to satisfy popular whims. There has been allowed to grow up in Western Canada, largely because of the improvident exploitation of timber lands, and innumerable array of manufacturing plants, the capacity of which can more than supply, for generations to come, the average demand which this country may expect. Either inordinate waste is to be the outcome, or some government action tending toward aid, through tariffs and regulation of the output. Advocacy of government regulation is often frowned upon, and anything partaking of the nature of paternalism viewed with disapproval. But, should the heritage of many generations be disregarded by the present? Is it not time that governmental activity be directed to the aid of the industry? A government commission, free from the taint of politics, might wisely be employed to restrict annually the cut of the mills—commensurate with the prospective demands of the season, based upon probable export and internal requirements. A "protective" tariff might then advantageously be imposed to guarantee the internal markets to the products "Made in Canada" until the industry shall have acquired a substantial footing. Protection to home industries, in a new country, was long ago established as the seed of a nation's manufacturing progress. It is only when an industry has grown with the country to a point where it can "paddle its own canoe," that it can be said that protection is unjustifiable.

This suggestion is paternalism, you say. Well, possibly so. Would it not be better than demoralized industry and wanton disregard of the rights of posterity in handling the timber resources? Would it not be better that a reasonable amount of lumber be manufactured proportionate to the requirements, and that it be done at a fair profit? Is not the laborer worthy of his hire the same to-day as a century ago, and are not all men, both employer and employee, laborers? Such a proposition would enhance the value of lumber—not beyond a reasonable point. After all, should our resources be exploited and devastated to such an extent that, as present-day consumers, we may profit from all their benefits, at the expense of future generations?

This whole idea suggests itself as a part of a greater scheme of conservation, to which, I believe, the retailer should lend his co-operative support to that of the manufacturer. It should partake of an allied effort of the two branches for the good of the general industry and for public service, and nothing is of greater importance than scientific and applied conservation of a nation's resources.

The time is ripe for greater work, for greater effort. Our own industry, both retail and manufacturing, must be operated in keeping with the present progressive age. New measures often create apprehension only because of their unfamiliarity. But life is growth; to grow is to change, and to be vital—no organization, any more than an individual, can afford to cling to worn out theories, doctrines, or practices belonging entirely to the past.

The association will render valuable service to its members, in proportion to their progressive attitude and loyal support.

Purchasing Power of Corn

"Good morning, Si."

"Good morning, Hi."

"I say, Si, what is the price of that wagon over yonder?"

"Ninety dollars, Hi."

"Ninety dollars! Why, my father bought the same wagon thirty years ago for $60!"

"Yes, Si, he did, and he bought it of me, but as money was scarce at that time and I wanted some corn, your father delivered to me 300 bushels of corn in payment for the $60 wagon, and I can use more corn at this time, and I will make the same trade with you to-day as I did with your father some thirty years ago on the same wagon, and will give you from stock, in addition to this wagon

At	$ 90.00
One White's power washer	50.00
One suit of clothes for yourself	20.00
One dress for your wife	20.00
One dress for the baby	5.00
One crib for the baby	5.00
Box of cigars for your friends	3.00
Five pounds of coffee	1.50
Two pounds of tea	1.00
Twenty pounds of sugar	2.00
Two hundred gallons of gasoline	40.00
Lubricating oil	2.50
	$240.00

the present purchasing power of 300 bushels of corn."

Mr. S. J. Grogan, in charge of the lumber department of McLean, Kennedy & Company, Quebec, died on July 2 after a long illness. He was 31 years of age.

The Future of Retail Lumber Associations

Co-operation with One Another, with Consumers and with Manufacturers Developing Splendid Results for Benefit of the Trade

By C. A. Bowen, Sec. of the National Retail Lumber Dealers' Association

COLERIDGE has said, "Often do the spirits of great events stride on before the events, and in to-day already walks to-morrow. There is no doubt that the economic business conditions of North America are about to undergo a change of great significance, and for some time past the business men have seen the shadow of the event. But what is it to be? The question is arising in every brain and there is a constant effort being made to peer into the future, with a great desire to foretell the event correctly. As yet, however, we have not been able to discover just what it is, but we know that whatever it is, it will be the result of revolution and will be for improvement in all lines, from a co-operative standpoint.

For many years we have had associations of men in competitive lines in a small way, but to-day we see organizations on every hand and in every line of endeavor, whether it be of capital or labor, education or hygiene, politics or religion, and men in all walks of life and business are fast coming to the realization of the fact that they can only succeed and better their own condition in proportion to the help and assistance they give to their fellow men. They are commencing to realize that organized co-operation is the dynamic force which make big achievements possible, and that they of themselves alone are weak and impotent.

There is no one line of business which has needed the close co-operation and unity, more than the lumber business from the retail section, and the retail yard lumber dealers, all over the country are commencing to realize this and seriously consider it. The gradual change in this line which has been coming almost imperceptibly for some time and the consequent shifting of methods has had its effect. The old order of things has been gradually disappearing and new condititons are constantly confronting the retail yard lumber dealers. Unfortunately for them they have not been awake to this situation and there has been a lack of co-ordinated co-operation in the protection and development of their business, a condition super-induced, no doubt, by the fact that they were getting a fair volume of business, which came to them without much effort upon their part, and by the false idea that lumber had a fixed place and could not be supplanted, and also by a sort of self satisfied feeling of independence.

The Inevitable Result of Indifference

The result has been that many substitute materials have been put upon the market, the promoters and distributors of which knew that they had to go out and create a demand for their products and go after the business and not sit down and expect it to come to them. They have been aggressive advertisers and solicitors and have presented their arguments to the consumers and the general public in such a manner that the public thought themselves more progressive if they used the "new and up-to-date" material in place of lumber which they formerly used. What were the lumbermen doing to combat this influence and to stimulate the trade in their direction? Nothing!

And then there were the so-called "fireproof material" agitators, seeking by law to legislate lumber out of existence, or to reduce its use materially, through representations, many of which were false, that the use of their products rendered the consumer proof against fire, loss of life, etc., and aligning fire marshals and fire insurance men on their side, so as to present a feasible aspect to their arguments, in building code revisions. And what, until only four or five months ago, were the retail lumbermen doing to protect their interests and tell the public the truth? Nothing! In some communities, when certain interests took up the cudgel in defence of lumber, I am ashamed to say, the yard dealers did not accord a helping hand, or even offer to render any assistance.

Opportunities Neglected

In the matter of grading rules for the materials they handle, retail dealers who are most vitally affected, have had no organization even to assist manufacturers of lumber in establishing rules and classifications. In the matter of the "ready-cut" house, which has been encroaching on their business, and which is also such a menace to their possible customers and so costly in the long run, they have done but little to counteract its influence and have been slow to establish a service equally as good or better in their own yards to offset it.

In the matter of becoming better merchants and more thoroughly educated as to the merits and users of wood for all sorts of construction purposes, they have been very lax and negligent. Investigation has developed the fact that amazing ignorance has existed and still exists in many quarters as to the application and uses of wood. Species and sizes have been sold for uses for which they were entirely unfitted. The retail dealer has not only permitted to be manufactured but has encouraged it by handling and selling such species as "loblolly" and "old field pine" for joists and timbers, when he should have refused to handle such materials except for such purposes as they were fitted for, possibly crating, sheathing, or box lumber.

Lumber, to many retail dealers, has been just "lumber," and instead of assisting their customers to select lumber best suited for the purposes to which they intended putting it, they have not done so, and, either from a lack of knowledge, or on account of indifference, have merely sold what they were importuned to sell, regardless of what its use was to be.

In the matter of trying to stop the shipment of transit cars of lumber sent into their territory without orders, by jobbers, wholesalers or manufacturers who, if the retail dealer did not see fit on account of quality or inability or other legitimate reason, to purchase it, made every effort to force it on the market to the retailer's natural customer, and thus demoralize the market, put the retailer out of business, and generally injure the lumber business, the yard dealers have not been effective because they lacked proper organization.

In the matter of unethical shipments, legislative matters, cost accounting, and many other things of vital importance to their business, there has been a wonderful lack of organized effort and it is obviously necessary that in all departments, the retail lumber business should have the organization and influence and to prepare itself for the new conditions.

The Old Order Giving Place to the New

No one who is a student of economics can fail to appreciate the many and rapid changes which have occurred in the lumber business in the last few years or to agree that there are other changes coming of great importance. Are the retail yard dealers awake to the situation, and are they prepared to meet and adjust themselves quickly to it? What will the conditions be in another twelve months, and what will they be after the termination of the great world war, whenever that may be? It must appeal to the reasoning power of every lumber dealer, that from this time forth we must have business aims that are far reaching, that every thought as to what we do now must be planned to meet conditions that may appertain five, ten or twenty years from now; that we must not attempt to work alone, but must co-operate as never before with our fellow men, and particularly with those we consider our competitors, or who at least are in the same lines as we are; that while we are in business for a livelihood and to make a profit on our investment, we must not forget that we are trying to maintain a business for the future and that we owe something to posterity which will be of value and assistance to them in attaining greater heights than we may be able to attain.

We must acquire the organization idea, and understand that only through organized co-operation can we accomplish what we seek. We must learn that it is just as essential to our business and our future to be members of, and contribute liberally of money and time to, a central body organized for the best interests of, for the protection of, and for the advancement of our business now, as it is to have air, light, water and food to maintain life in our bodies and to be healthy.

We must realize that we cannot do ourselves any good nor give those dependent upon us any benefits by holding aloof from association and organization and being indifferent to improvements, and that individually we cannot, on our own responsibility, bring about any important reforms or improvements in our business. Only in unity is these strength.

The Case in a Nutshell

The National Retail Lumber Dealers' Association of the United States was formed some months ago, by retail lumbermen who realized the need for such a force and the demand for it in the face of present and future conditions. Its object is along the lines set forth in this article, viz.: to promote the general welfare of the retail lumber dealers of the United States; to co-operate with associations of lumber manufacturers and others in collecting and distributing information concerning the proper uses of wood and the general state of the lumber industry; to prevent as far as possible the sale of lumber of inferior

grade, kind, or manufacture; to correct business abuses in the lumber industry; to promote uniformity in the customs and usages of the men in the lumber business throughout the country; to stimulate lumbermen everywhere to the necessity of advertising lumber in an intelligent manner; to work with manufacturers in an effort to have all timber branded and trade marked, so as to assure, within a reasonable variation, the integrity of the grade and to make possible the identification of the stock; to protect the retail lumberman and his business in all ways where any adverse influence is being brought to bear and to be the parent body to the retail business in every way.

Recent developments, owing to war conditions, have shown clearly that the interests and efforts of every city, every village, every hamlet and every individual must be co-ordinated with those of the government, and parallel conditions in the lumber business are bringing about the same needs and justifying the existence of the National Association. One must not look lightly upon the important part this association is already playing and the much more important part it is destined to play in the retail lumber business and the very important position it must assume.

Co-operation is the product of sane and broad-minded men. The greatest success is obtained by men with the co-operative spirit, combined with energy and alertness; the men who will put their shoulders to the wheel with their fellow men in the interests of the cause which will help all. The value is not to be computed alone in dollars and cents, for association carries with it an uplift, a broadening of views and a stimulation to ambitious effort, and it instills a courageous spirit to brave difficulties and turn failure into success.

The lumbermen, in the retail section, have come to the awakening period. They are commencing to realize that they must co-operate to protect themselves and their business. They are commencing to realize that lumber can be surplanted by other and inferior materials and that it is necessary for them to advertise their materials to the consuming public the same as any other commodity, if they do not want the fickle minded public to forget the good qualities of lumber and chase after will-'o-the-wisps, in the nature of substitutes. We know that it costs to advertise, to influence public opinion, and to educate the customer. We know that force is not a factor in demand but that demand influences the price, but we must do our share, if we wish to compete and secure our portion of the business.

Retail lumbermen are commencing to realize that they need the influence of a strong organization to help combat outside influences and assist them in legislative work. They are commencing to realize that they need a central organization to keep them advised of fraudulent concerns in the lumber market and from which they can secure information concerning contractors and builders who move from one town to another, as to past record and history for credit purposes, and thus get protection.

They are commencing to see the necessity of becoming better merchants, having better sales forces, better cost accounting, better service and more up-to-date methods of all sorts.

The new era is dawning for the lumber business and if the retail lumber yard dealers all over the country will, as we believe they will, unite with their fellow dealers in the membership of the national or central associations, and do their share and their duty to themselves and the business, it will not only be the second largest industry in the world, as it is today, but it will be one of the most efficient, most fruitful and most highly respected businesses in existence.

Co-operation Makes Business Ideal

Separation Results in Discord and Failure to Realize Trade Possibilities—Association of Live Individuals the Goal of Organization

By Geo. Wilson Jones

JUST came in from seeing the 48th Canadian Highlanders united with the U. S. boys in a magnificent parade to stimulate recruiting. The newspapers can't find type big enough to fully emphasize the welcome given the Kilties and their visit to this country is doing an immense amount of good aside from the military value of their visit. Their visit brings to mind exactly the thought the Editor of the Canada Lumberman conveyed in his recent letter asking some ideas on association work.

Association is to be distinguished from organization. The former lays the emphasis on the individual, while the latter exalts the machine. The association needs organization, but if the spirit of association grows cold, no perfection of mechanism will produce the desired results. When the Highlanders march through our streets we feel that both Canadians and Yankees are bound together to accomplish one purpose and the feeling of unity is so strong that any minor points of difference at once become too ridiculous to enter into the question at all. That is precisely what happens when lumberman become associated. The lumber business is our life work and should be more than merely a mine where we get money to support us. There must be a pride in the business per se before we can bring it up to the point we aim at.

Every association worker keeps asking himself the question: "Is an association necessary?" This question keeps him thinking along a straight line. It prevents the work going off on a tangent and exhausting resources and energy in matters that do not pertain to the business as a whole. An association is necessary because no one dealer has a monopoly of ideas. Time was when it was considered suicidal to share your knowledge with your competitor. That was because the prime motive was making money and not giving service. We are progressing toward the time when a business man will have to give a reason for his existence and the business man who trains himself along the lines of service is the one who will survive. Your customer never buys mere lumber of you, but buys a floor, roof, addition, or complete building. Put in a still different light, the customer has an idea and comes to you to put that idea in tangible form. Get those two thoughts fixed:—You furnish service to your community and you sell ideas. Here is where the association principle comes in again. You get new ideas through association with your brother lumbermen and the only way you can meet them is through your association. Individual visiting is possible only in a slight degree. At a meeting, whether provincial or local, you meet a large number at the financial outlay of seeing one. This shows the economy of conventions. The term "convention" could well be discarded and the word "conference" used. There is the same difference between convention and conference as there is between organization and association.

Eradicating Erroneous Impressions

There are some old worn out notions that modern association workers are trying to eradicate. One of these is that the only honest reason men in the same line of business have for meeting is to fix prices. Practice has shown that prices cannot be fixed. There is always some one individual who thinks it is smart to cut, and as soon as this happens, away goes the combine. Another erroneous idea is that there is some innate antagonism between the retailer and the manufacturer. No one has ever attempted to give reasons why there should be, but certain men cannot conceive of activity that doesn't include a "scrap." Still another error is that all the association amounts to is a celebration once a year, and that there is no sense in paying dues to keep a secretary in idleness between conventions. As an actual fact, the conventions could be spared most easily of all activities, for the reason that they last at the most three days, while the spread of ideas from the headquarters goes on continuously. Now one more,—That there are so many calls on business men that they can't afford the additional expense, or, as some put it, there are already too many organizations. This error consists of the notion that dues are a contribution. Combat it with the thought that dues are payment for ideas that are just as essential as lumber itself.

The spirit of association can best be taught by local meetings. Take the dealers in a section whose problems are similar and who naturally come into competition, bring them into a local club, let them get acquainted. It is amazing to see how difficulties disappear. Such meetings are to the business man what the clinic is to the meeting of surgeons or the institute to the gathering of educators. The idea grows that competitors are not therefore enemies and a man gets big enough to rejoice when his fellow dealer lands a good bill. It brings out the fact that success means thoroughness. A man's natural pride stimulates him to be as good a manager as his neighbor. The territory covered by local clubs presents a better appearance than one where each man feels aloof from his neighbor. It also takes the sting out of competition. At a meeting a short time ago a committee was appointed to take a long trip and one man appointed asked to have his competitor also appointed to make the journey a pleasant one. That is what association does. Remember always that the basic principle of an association is to bring the dealers together so that they may be-

come better merchants. It follows inevitably that their customers get better service. When there is a better knowledge of merchandising, the manufacturer recognizes that the retailer is his head salesman, the man he looks to for the distribution of his goods. The association develops ability and reliability, these two beget confidence, and confidence just as surely begets orders. Orders mean profits, and profits mean success. There is nothing mystical about association work. The purpose is to make better merchants, and there is no short cut to this goal. Every activity must have this in view or it is wasted motion.

Association for Educational Purposes

There is a vast amount of education needed by every lumber dealer. He must learn that his customers know practically nothing about lumber and he should be able to advise them. The day has gone by when a man can sit in his office and wait for trade. He must learn that orders belong to him who hustles. He must not take the name "lumber yard" too literally. If his yard is "lumbered" with dirt, shabby piles, weeds, refuse, and all sorts of extraneous matter, he will not get the business. The modern store tries to have the entrance so alluring that a customer can't pass by. The store floor is on a level with the sidewalk. There is no chance of soiling or tearing the customer's garments as he enters. There is a smile awaiting him as attractive as the show window. How does this compare with the usual lumber yard? Such points as these are brought out and developed at meetings of dealers.

There is always the old bugaboo of the mail order house. It is a strange coincidence, perhaps, but the live dealers are not the ones who complain of this sort of competition. Being on the ground, knowing their trade, adopting modern methods, they are able to cope with any sort of outside competition. If half the energy wasted on calling mail order houses names were used to improve one's own methods, the mail order man would have pretty slim pickings. The mail order people know this, too. They don't put on their campaigns in towns where the newspapers are alive and well supported by the local merchants. The mail order ridden community is itself to blame and has invited the competition. One thousand inquiries sent out brought six hundred replies giving as the reason for the first mail order sent in, the discourtesy and lack of attention on the part of the local dealer.

There are two essentials to a good association. First, a group of "live wires" who will help organize local clubs, and who will give their thought to the organization. Second, a secretary who devotes all his time to the work and who can put into force the ideas of his "live wires." There is no use in wasting time if the secretary is to be handicapped by lack of funds and insufficient assistance. In years gone by, the secretary was some dealer who had so little to do he could take on the work and make some sort of a show of serving the members. If the idea is permitted to grow that the secretary is the association, there will be no support. If the true meaning of "member" is kept in mind, the association will grow stronger each year. The members ARE the association and the secretary is nothing more than their executive. Individual responsibility is what gives strength to the association and it cannot be developed when a member feels he is merely a customer of the secretary.

The association should develop as many special service departments as its funds will permit. There should be a traffic department, a legal department, an intelligence department, and an educational department. It doesn't matter how high the dues are if the members get adequate returns, and it is easier to finance an association doing something definite than one that exists merely as the embodiment of some mysterious force that will make a man when he joins more prosperous. The association is valuable in crystallizing the ideals of the trade and has an ethical influence that cannot be over estimated. As one very successful dealer recently put it: The lumber business is just what you make it; co-operate and the business is ideal, separate and it is hell.

Retailer's Interest in Wood Treatment

Preservation of Structural Timbers a Valuable Aid to Him in Giving Good Service, Building up Trade and Holding it

By Kurt C. Barth

The practice of wood preservation, or preservative treatment of structural wood with creosote oil, by the great mass of consumers—residents of the rural communities—is possible only if the available methods are economical and practical, i.e., conform to existing conditions.

An important function devolves upon the lumber dealer:

His interest in a sale commences with the delivery of the lumber. Thereafter the proper use of the product should be his greatest concern. If the purchaser fails to protect the sill, or whatever it may be, and it deteriorates quickly, it may be the consumer's loss, but eventually it is the "lumberman's funeral."

A "Substitute" for Every Purpose

There is a substitute product for every purpose for which wood is used, waiting and watching to capture the dissatisfied lumber consumer, who quite naturally is responsive to claims of superiority over wood because of his unintentional misuse of the lumber which he has purchased from some lumber dealer who "didn't care what happened to it after the sale," or who thought "the quicker wood rots the better."

Any product, no matter what it may be, is valuable to the consumer in proportion to the service it renders. The merchant retains and extends his patronage in proportion to the service he renders.

It is thus necessary for the lumber dealer to include wood preservation as one of the most important service features.

In order that the dealer may be able to advise his customers how to creosote lumber and protect it from decay he must familiarize himself with the fundamentals of the subject. He may acquire sufficient knowledge for his purpose with little trouble by careful perusal of the bulletins discussing wood preservation, which are issued by Government Departments, various agricultural colleges, lumber organizations, and manufacturers of refined creosote oil. The writer recommends more especially the bulletins mentioned below:

Farm Bulletin No. 744, issued by the U. S. Department of Agriculture, Washington, D.C.

Farm Bulletin No. 158, issued by the Iowa State College, Ames, Iowa.

Farm Bulletin No. 3, issued by the National Lumber Manufacturers' Association, Chicago, and Bulletins issued by the Barrett Co.

Upon careful consideration, numerous instances will occur where the preservative treatment of wood becomes of valuable assistance in the promotion of the use of lumber. Quite unconsciously selling talks present themselves which completely nullify the "permanence of substitutes" argument. Opportunities for advertising lumber in a new way are also offered, and its durability may be emphasized in connection with "rot proof" qualities when creosoted.

The development of this "service feature" is divided into the following stages:—

It is obviously necessary for the dealer—

First: To ascertain for what purposes the purchaser intends to employ the lumber he has bought, and determine whether the conditions under which it will be used are such as to permit the development of decay.

Second: To determine what method of treatment is most advisable under existing conditions, and what the approximate cost will be.

Third: To determine the increase in life which may be reasonably expected from creosoting, and the resultant saving to the consumer.

Fourth: The dealer must induce the customer to creosote such material as will be exposed to decay, and advise him in minute detail how that is to be done.

Fifth: The dealer should sell the customer a sufficient quantity of creosote oil at a reasonable price.

Sixth: If a large job of creosoting is under consideration, or the case in question presents difficulties, the dealer should consult experts of the Forest Service, or those employed by the large manufacturers of refined creosote oil.

Simplicity of Treatment

The most practical manner in which the ultimate object, that is, the protection of wood from decay and increasing its durability to equal that of any of the so-called "permanent" building materials, may be most speedily attained, is to induce landowners and other consumers in rural districts to brush treat with refined creosote oil all structural wood subject to decay, and then for the dealer to sell him the creosote oil.

Other methods of treatment have been discussed at various times, and it has been suggested to the retail lumber field that dealers pur-

chase creosoted material from the commercial creosoting plants carrying this in stock, just as they now do the untreated lumber. It has also been suggested that they should erect open tank plants in their yards, creosoting the material themselves upon request from the customer.

After very carefully conducted surveys the writer has come to the conclusion that for the present, with the exception of yards conveniently located to commercial treating plants or such as are equipped with facilities permitting the installation of open tank treating plants, neither of these propositions is practical. The average retail lumber yard has not enough demand to permit the purchase of creosted stock in quantities sufficient to warrant the trouble, and open tank creosoting plants are not possible due to insurance regulations which prohibit a fire, enclosed or open, within 150 feet of the outside boundaries of such yards. Thus the brush method of treatment is the only practical means at hand by which the propaganda of universal protection of creosoted wood from decay may be furthered in a practical manner, and will gain sufficient momentum so that in the future either one of the more efficient processes discussed may be made available.

It is less difficult to use creosote than paint. A good wide paint brush, preferably wire bound, a common bucket in which creosote oil may be heated, and the "equipment" is complete. Application of two coats of refined creosote oil to all points of contact, and all surfaces which will be exposed, complete the treatment. Thus by the most simple operation, the life of building lumber so treated is materially increased; no skill or special energy is involved.

The utter simplicity of the treatment is the sole danger. It often leads to carelessness which defeats the entire treatment. The fact that posts, sills, or other material treated by the brush method are not entirely impregnated, or black throughout, as for instance a railroad tie, does not indicate that the treatment is of no value or not worth while. This thought should not be permitted to deter anyone from adopting the brush method. It is an absolute fact that two coats of the proper grade of refined creosote oil applied in a heated state to the surfaces of properly seasoned timbers will protect them from decay for a period more than sufficient to warrant the expense and trouble of treatment. Many telephone poles and electric light poles so treated bear evidence of the relative efficiency of this method, and under certain conditions such treatment is made the standard. Coal trestles and other exterior structures have likewise been treated as described with the known result of satisfactory additional life.

Brush Treatment Meets Farm Conditions

The fact must be borne in mind that we have the practical conditions of the farm to meet, and that the brush method alone is available at present. It is economical, easily executed, of great advantage to the consumer, and a source of profit to the dealer.

Creosoting wood, in addition to protecting it from decay, will also prevent destruction by insects such as termites (white ants). Hog houses, chicken coups, and animal shelters of nearly every description are made more sanitary by treatment with creosote. The writer has been informed of cases where creosoted corn cribs have protected the contents from field vermin, and this would also apply to other grain storage structures and buildings of similar types.

In the final analysis coal-tar creosote oil is strictly an accessory to lumber, and it should be handled as such by every lumber dealer for the protection of his own interests in combating substitute competition, because of the service he renders his customers, and for the profit there is in it.

Figuring Out a Retailer's Profits

Explanation of the Difference Between Using Invoice Cost and Selling Price as the Basis for Profit

By H. R. Isherwood

The increase in cost of materials, and additional capital required, coupled with increased operating expense, has caused retailers to adopt more modern methods to meet the additional burden of expense.

To adopt these more modern methods has led them into the mysteries of "cost" to operate with the knowledge of such in mind, and having decided on the net profit over cost they should have, and applied it in their way, the result is further mystery at the end of the fiscal year, and a balance sheet showing a net profit of five per cent. instead of ten per cent. net profit added to cost.

This mysterious loss of five per cent. has greeted many retailers, like a thunderbolt from a clear sky. The answer is: say it cost you 15 per cent. to operate, you added 10 per cent. to your cost, making 25 per cent., and for an example the invoice price on a thousand feet of lumber is $24.00—to arrive at your retail or selling price you have added 25 per cent. to invoice price, or one-fourth, making your selling price $30, or net profit of $6.00, which is 20 per cent. gross profit on selling price, leaving net profit of 5 per cent.

Your trouble is, in the first place, that, in arriving at your cost of operating of 15 per cent., you reached this figure from your gross annual sales, and in adding your percentage of profit, you have added percentage to invoice price, not selling price.

This is not new to all. It is becoming better understood every day, yet there are many in the retail business who will continue figuring their cost on their invoice cost instead of selling price.

The following profit tables taken from the "Lumberman's Searchlight," will enlighten you.

TABLE FOR FINDING THE SELLING PRICE OF ANY ARTICLE

Cost to do Business	Net Per Cent Profit Desired																				
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	25	30	35	40	50
10%	85	84	83	82	81	80	79	78	77	76	75	74	73	72	71	70	65	60	55	50	40
11%	84	83	82	81	80	79	78	77	76	75	74	73	72	71	70	69	64	59	54	49	39
12%	83	82	81	80	79	78	77	76	75	74	73	72	71	70	69	68	63	58	53	48	38
13%	82	81	80	79	78	77	76	75	74	73	72	71	70	69	68	67	62	57	52	47	37
14%	81	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	61	56	51	46	36
15%	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	60	55	50	45	35
16%	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	59	54	49	44	34
17%	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	58	53	48	43	33
18%	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	57	52	47	42	32
19%	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	56	51	46	41	31
20%	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60	55	50	45	40	30

Rule.—Divide the cost (invoice price with freight added) by the figure in the column of "net rate per cent. profit desired" on the line with per cent. it cost you to do business.

The percentage of cost of doing business and profit are figured on selling price.

Example.—Cost of lumber, including freight, $24.
Net profit desired 10 per cent.
Cost to do business 15 per cent.
Take figure in column 10 on line with 15 which is 75.

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75)240,000(32.00 = the selling price.
   225
   ---
    150
    150
    ---
     00
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The reason why.—While the calculation of expense and profit upon the basis of cost may be arithmetically correct, commercially it is not. The difference provided through the calculation of operating expense and net profit upon the selling price instead of cost creates a defense against contingencies and disappointments such as—

Natural depreciation of stock.
Depreciation through overbuying or mistakes in buying.
Dishonest employees.
Losses by individual bad debts.
Special sales or extra advertising in backward seasons.

The following table shows the percentage of cost which must be added to effect a given percentage of profit on the sale:

5 %	added to cost is	4¾ %	profit on selling price	40 %	added to cost is	28⅓ %	profit on selling price
7½	"	7		45	"	31	
10	"	9		50	"	33⅓	"
12½	"	11⅛	"	55	"	35½	"
15	"	13	"	60	"	37½	"
16⅔	"	14¼	"	65	"	39½	"
17½	"	15	"	66⅔	"	40	"
20	"	16⅔	"	70	"	41	"
25	"	20	"	75	"	42¾	"
30	"	23	"	80	"	44½	"
33⅓	"	25	"	85	"	46	"
35	"	26	"	90	"	47½	"
37½	"	27¼	"	100	"	50	"

The retail building material business is no better than its average practices.

Are yours above or below the average?

Do you figure an intelligent profit or do you hinder your neighbor from making one?

U.S. Shippers Are Given Warning

Shippers were given a warning recently by a member of the United States Railway War Board, that unless the closest co-operation took place between shippers and the railroads there would be a more serious transportation situation a few weeks hence than has ever existed throughout the United States, as a result of the embargo on exports. Unless shippers follow three emergency rules, he predicted, production of all kinds would be slowed down all over the United States, with the result that every branch of industry, labor and the public generally will suffer, and the production of and transportation of war supplies to Europe incur a setback. The member of the war board advised that shippers follow these rules:

"1. Take immediate steps to get governmental permits for the shipment of products now in transportation or awaiting trans-oceanic shipment, and in the future have such permits actually in hand before such shipments are loaded into freight cars.

"2. Load cars to full capacity or up to 10 per cent. in excess of the marked capacity.

"3. Use greater speed in both loading and unloading cars."

Logging Operations in Central Ontario

Methods in Use by the Pearce Company, Limited, Marmora, Ont.—Modifications of Usual Practice Necessitated by Topography of Country

By R. N. Johnston and A. W. McCallum*

The limits of the Pearce Company, Ltd., Marmora, Ont., are located in Lake Township, Hastings County, in the southeastern portion of the Trent watershed. This tract was logged for fifty years previous to 1902, when the Gilmour Company, of Trenton, Ont., sold their limits to the present owners. The Gilmour Company logged for white pine only, and sold out when that species ceased to exist in merchantable quantities. Hemlock and elm, basswood and black ash—hardwoods which it is feasible to drive—and such scattered sticks of white pine as remain are now being logged. The cut this year is estimated at 1,500,000 feet b.m., and the number of logs at 20,000. Cutting at the rate of from one to two million feet a year, the owners expect to be able to continue operating for from thirty to forty years.

Having their own mill at Marmora, which is about sixteen miles from the place where logging is now being done, the company have no trouble in disposing of their logs. The transportation of the logs from the operation of the mill is accomplished by driving, Otter Creek, Beaver Creek, and the Crow River being utilized for this purpose. Labor is at present rather scarce, and is mostly native. Some French-Canadians are employed. For ordinary labor wages run about $35 to $50 a month, with board and lodging.

In addition to their sawmill, which was burned in March of this year, but is being replaced by an up-to-date plant, a planing mill and a grist mill are operated. Formerly a general store was also included, but this was destroyed by fire and was not rebuilt. A portable sawmill, owned by the company and having a capacity of about 15,000 feet a day, is being used to handle this year's cut.

In addition to their former holdings of about 25,000 acres of freehold lands, the company bought outright from the Gilmour Company about 10,000 acres of deeded lands, in addition to some 35 square miles under license from the Provincial Government.

Lumbering has been carried on in this district for a great many years—for longer, probably, than in any other district in Ontario excepting the Ottawa Valley. Formerly, when white pine was being logged, operations were carried out on a large scale; but this stage has passed and the small-scale operation has succeeded it.

Two fire rangers are maintained on the limits for five months of each year. They are paid at the rate of $75 a month, with no allowance for expenses. Small fires occur periodically here, but, owing to the topography, the timber, which is confined to the valleys, is not damaged to any extent.

During the past season logging was done by contract, the foreman having the contract.

Four types may be distinguished in this region, namely:

1. Hardwood Ridge Type.—Beech and hard maple are the leading species here.

2. Mixed Type.—This type is found on the lower valley slopes and in shallow swamps. Hemlock, pine, basswood, maple, and elm are the principal species.

3. Swamp Type.—This is not very extensive in area. Cedar, black ash, and yellow birch, with scattered black spruce and tamarac, are the species composing this type.

4. Burn.—The soil is thin, and commonly in a burnt-over area the bed-rock lies exposed. If any reproduction is present it is white birch and poplar.

The Stand of Timber

For the average stand per acre 1,000 feet may be taken as a reasonable figure. The maximum stand per acre is about 10,000 feet. By actual count on the skidways the percentage distribution of species was found to be:

Conifers, 70 per cent.—Hemlock, 80 per cent.; cedar, 10 per cent.; pine, 10 per cent.

Hardwoods, 30 per cent.—Basswood, 50 per cent.; elm, 40 per cent.; black ash, 10 per cent.

Birch and maple are not being logged at present because of the difficulty in driving them. Slightly over 90 per cent. of the cut is used for saw timber, and the remainder for poles, posts, ties, and shingles.

On the whole, the timber is very sound, especially the hemlock. The timber is straight and of average taper. Any log length down to 8 feet is taken, if the quality is such as to warrant it. The average log contains 75 feet.

The country presents the usual features characteristic of the Laurentian shield—low-rounded, irregular hills, with deep, steep-sided valleys intervening. Evidences of glacial action are very prominent. As might be expected with such topography, logging is very difficult and expensive. The logging units are small and of irregular and unsatisfactory shapes, the ground being of such a character that each operation requires a plan of attack differing, in detail at least, from any other. In many cases no skid roads are needed, as it is possible to roll the logs down the hillside to the haul road in the valley below. The rivers are crooked and rough, requiring many dams, hence driving is expensive when the short distance to the mill is considered. However, it is the only practicable method of taking out the logs.

The winters are of sufficient severity to provide continuous snow and ice, which are of great importance in logging. Operations usually begin early in October and are carried on with but few interruptions until the latter part of March. The snowfall provides an abundance of water for driving the streams.

Water Transport

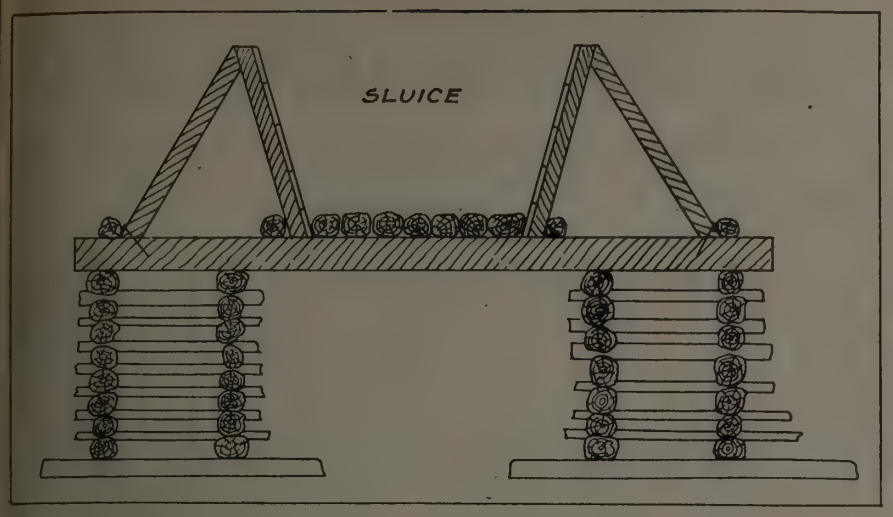
The Pearce Company drive their logs for a distance of sixteen miles down the Otter and Beaver Creeks and the Crow River to their mill at Marmora.

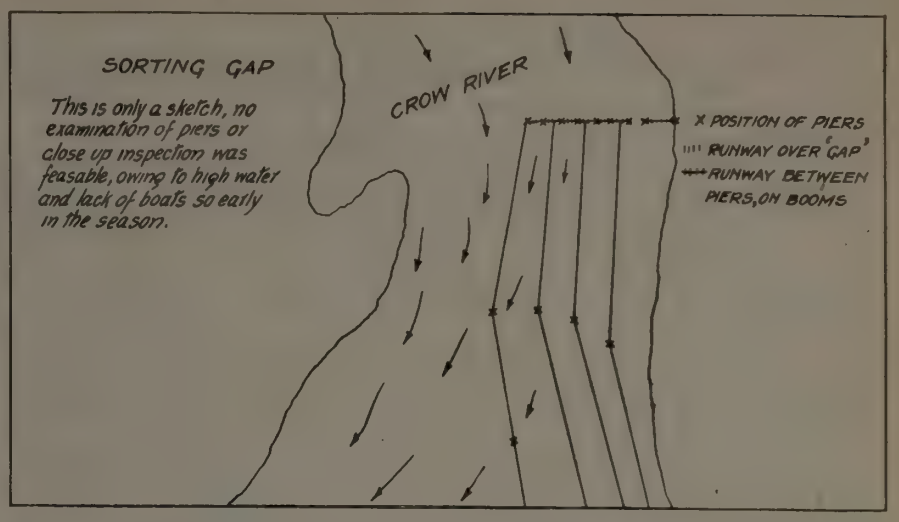
Dams.—Because of the rough water, dams are very essential in this region. The prevalence of solid rock bottom to the streams provides numerous excellent dam sites. In this country dams are usually small, and are built where needed, with little exercise of choice of site. Some of the larger stop-log dams have, however, where conditions of water flow leave a choice possible, been chosen at advantageous points.

*Graduating students of the Faculty of Forestry, University of Toronto.

A typical dam on a Central Ontario logging stream.

Sluice and dam combined on a Central Ontario logging stream.





such as (1) the outlets of small lakes, and (2) where the solid rock narrows in upon and underlies the stream; such conditions, as a rule, producing rapids or falls. Costs vary greatly, according to season, size, and proximity of materials, but are estimated to range between $150 and $500.

Sluices and Flumes.—In connection with all the dams seen sluices were operated. No flumes are used at present, but one is to be constructed by the Pearce Company at the head of Otter Creek, to overcome a fall of about 50 feet. The sluices were all of timber construction, hewn on four sides and unlined. The only lumber seen around either dams or sluices was used in facing the former, a practice which seemed general. Maintenance of sluices is included in dam charges, and is not very well known, as, indeed, is the case with dam costs generally, inasmuch as both construction and early maintenance were undertaken by the Gilmour Company. Charges for driving works by the Pearce Company are mainly listed as improvements or repairs of old dams. It was estimated, however, that maintenance would not exceed $500 annually for the sixteen miles between the rollways and the mill.

Accumulation of Debris.—Because of good gradients accumulation of debris in the stream channels is not important. The removal of boulders has been effected in a few cases by dynamiting, but this is not usually necessary. Obstructions to driving on this route are at a minimum because (1) the route has numerous and adequate improvements for water storage; (2) the banks are well defined; (3) there is a heavy snowfall; (4) the drive can be completed within three weeks, using only the best water stages.

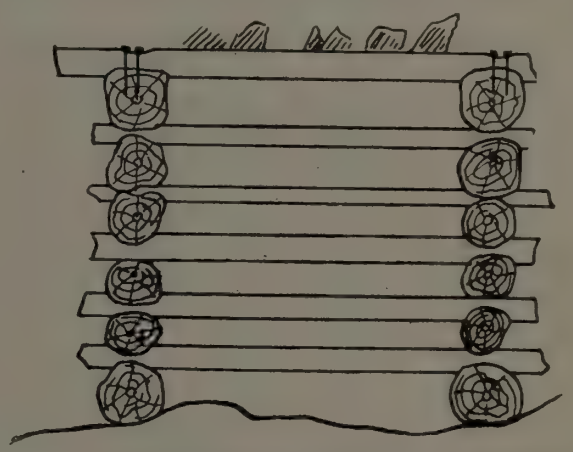
Sorting Gaps.—The third variety of driving works comprise what are called "sorting gaps." An example of such equipment is seen at Marmora, just above the dam in the Crow River. It is used (1) to separate the company's logs from those of other companies driving into and out of Crow Lake; (2) to grade the company's logs. This is necessary because of the mixed character of the drive, the hardwoods being rafted separately where they can be easily landed or recovered if they should sink, no such precaution being necessary with the conifers.

Driving Loss.—Because of the shortness of the drive, the small streams, and the rapid current, little loss is experienced between the landing and the jack ladder, it being stated that only 500 logs were recovered from Beaver Creek when that stream, which has been driven for over thirty years, was recently cleared for the first time.

The Planing Mill

The planing mill is located at Marmora, near the Pearce Company's sawmill and adjoining their grist mill. It operates throughout the year. It was erected about thirty years ago, and will continue to operate until the company's supply of timber is exhausted. Window frames and sash, door frames and doors, and planed lumber are the principal products. The market is chiefly local, very little being shipped to outside points. One specialized product for which there is a large local demand is a double door, for use in winter as a storm-door and in summer as a screen door. Ironing boards are another specialty for which a great demand formerly existed. All kinds of turnery, including interior finish, casings, mouldings, etc., are made as required. Seconds are used for all products except sashes and doors, for which the best pine is required. No definite figure can be given for the total annual output, as it varies greatly from year to year, according to the demand.

For purposes of fire protection three barrels of water are kept on the roof of the planing mill, and throughout the mill fire buckets are kept. No insurance is carried, and there have been no fires as yet. The mill is a two-storey frame building, one end of which is used as a storeroom for the finished products—sashes, frames, etc.

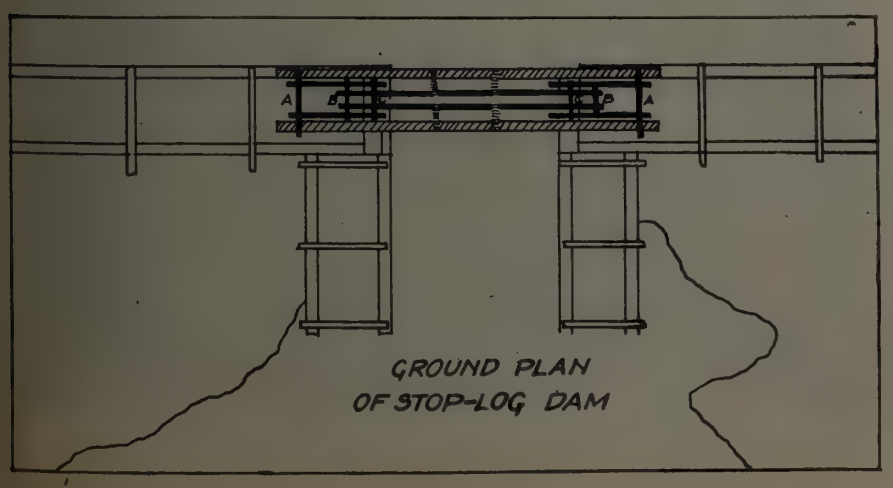


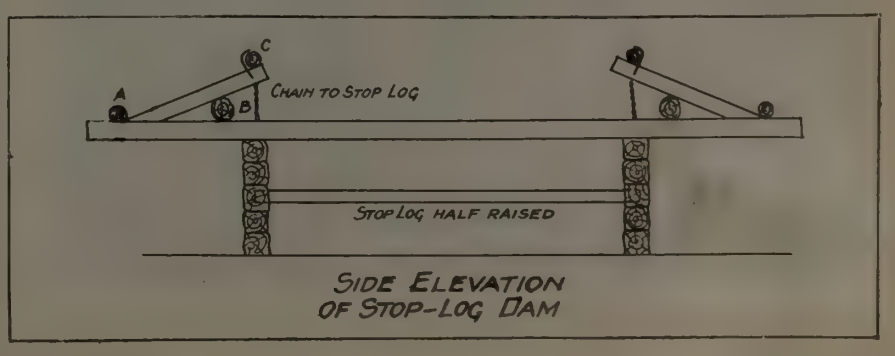
ROCK BALLASTED CRIBWORK
(THE BASIS OF ALL DAMS)

The source of power is a 14-foot drop in the Crow River. Water is stored in Crow Lake, and is entirely adequate for the present plant, the variation of water above the dam never having been known to exceed four feet. The water-wheel which develops power for the planing-mill is about seven feet in diameter. Its rating is unknown, but is estimated at between 25 and 35 horse-power. A 56-inch wheel develops power for the municipal lighting plant, and is rented at $1,100 per annum. The wheels are all of the turbine type.

A list and brief description of the principal machines gives an approximate idea of their work. They are:

1. A wooden hand-lathe, with a set of 12 lathe tools, for general turnery purposes.
2. A planer.
3. One sticker. The most up-to-date and complex machine oper-





ated. It has four cutting heads, which are all adjustable, and may all be used at once or separately.

4. One matcher or tongue and groove machine. This, together with the cut-off and edging saws, comprises the items in the planing process.

The machines used in the sash, door, and moulding operations are all lighter and smaller, and are operated on the second floor. All are of standard types, and the list includes one jig or cut-off saw, one moulder, a band-saw with a three-foot wheel, a sanding machine, consisting of a revolving pad on a swinging arm, adaptable for all purposes, a two-headed sticker, two jointers and tenoners, a hand-clamping machine, and rip-saw.

All planed material is first kiln-dried and then separated, according as stock, orders, or class of material may dictate, the planing and turnery stock being kept downstairs and the sash, door, and moulding upstairs.

Waste products are largely in the form of shavings and sawdust, and these are used for heating the kiln. The kiln is located in a separate building, immediately adjoining the planing-mill. It has a capacity of from six to seven thousand feet, and lumber is left in it from three to four weeks.

Finished lumber is stored outdoors in two long rows of covered racks, which are protected on one side, and which, together with the mill and the office of the company, stand on the four sides of a plot of ground approximately 100 by 200 feet, forming the yard.

Though the whole operation is small, it is typical of the greater number of planing operations in this country. In this case, however, the owners intend to extend the operations to include the manufacture of some specialized products, such as spools, buttons, or clothes-pins, being encouraged in this by the passing of rival concerns and by the prospect of renewed trade after the war.

C. N. R.'s Mill at Foleyet, Ont.

First of a Series of Plants to be Erected in Northern Ontario Will Handle Settlers' Logs

Forced to commence creating a rail haul on the new section of line north of Sudbury and between there and Port Arthur, and at the same time requiring ties for maintenance of way, the Canadian Northern Railway have erected their first sawmill and pulp barking plant at Foleyet divisional point, being one of a series which it intends to construct throughout the clay belt along their line. The first plant is erected at Foleyet, where the line running east and south practically leaves the clay belt section, and the plant is designed with sufficient capacity to handle all of the settlers' requirements in its immediate vicinity; the possible output being 150 cords per day of 24 hours.

The output of the barking plant is being shipped to the mills in Niagara district which have not received pulp concessions from the Crown, such as the Ontario Paper Company and the Beaver Board Company, of Thorold. On this delivery the company receives a rail haul of from $4 to $5 per cord between Foleyet and Toronto, the exact amount depending on the weight of the wood and the point beside the barking plant at which it originates.

The Foleyet plant will, during the coming year, originate $200,000 of freight and passenger traffic, and the continuance of the policy of erecting mills could, within four years, result in originating a freight and passenger traffic amounting to $1,000,000 a year. The pursuance of this policy across the present 500 miles of forests would soon assist materially in the payment of interest on bonds issued on this piece of connecting railway between the western and eastern lines of the system.

The tie requirements for eastern lines of the Canadian Northern are one million ties per year, and the amount of ties being manufactured by the sawmill at Foleyet this year will be 250,000. The sawmill will run day and night for the balance of the season, and the expected output will be at least 2,500 ties per day, together with a large quantity of lumber. The equipment consists of a battery of four boilers, the engine capacity being 250 h.p., which drives both pulp barking plant and sawmill. Tie slabbing is performed by a circular which is preferred to a band mill, and a bull edger is installed for cants. The usual lumber trimmers and edgers are in use, together with tie trimmers, a large hog for furnishing finer fuel to the dutch ovens; a lath mill, shingle mill, planing mill, etc. The filing room machinery is driven by a separately installed engine. A large fire pump is at present being installed. The log haul-up bringing logs from the water up to the slasher was furnished by the Waterous Engine Works Company, Limited, Brantford, Ont., who also supplied a lot of the shafting and other parts for the plant.

The barking plant consists of a Waterous 9-saw pulpwood slasher; one of the 10 x 30 American barking drums delivering to sorting tables, return conveyors and a long outside conveyor having chutes for the loading of ten cars. The design of the latter conveyor also permits of the loading on the return cable of four foot settlers' wood or company wood from cars or sleighs. The first year's output of the mill, although mainly confined to tie timber, will yield 20,000 cords of pulpwood. Both mills and the lumber yard are lit by a 500-light dynamo driven from a separate engine and boiler. The machinery in the main was secured from the company's mills in the west, and this industry and others across the clay belt are designed to afford woods employment and mill employment to settlers going into the clay belt section, together with a market at the camps and mills for hay, oats and other farm products, which is the only systematic method of settling the clay belt.

While the adjacent land has not yet been thrown open to settlement, many are already on the ground awaiting the opening of townships now being surveyed, and already several stores are erected, which would be a credit to any town in eastern Ontario. The fact that the mill site town is a divisional point as well, materially assists development both at town and mill, the latter place being well served with switching facilities due to the one heavy main line engine serving both mill yard and divisional point yard.

Three hundred acres of clearing has recently been made for fire protection, and part of this is being stumped and plowed between the existing woods and the townsite and mill for protection against running ground fires, so prelavent in the north.

The large 300 acre clearing will be mainly devoted to a company farm for the growing of hay and oats for mill and camp horses. This farm will be conducted as an illustration farm for the district, along sound farming lines. As the natural location for the Crown lands office for the district is at Foleyet, intending settlers will be able to see up-to-date farming methods when they are visiting the Land and Recording office.

The timber and milling operations, together with colonization and mining, are in charge of Cyril T. Young, Manager Eastern Lands, Canadian Northern Railway.

Canadian Northern Railway Company's plant at Foleyet, Ont.

Scene in the woods on Canadian Northern Railway limits.

The High Cost of Destruction by Fire

A Consideration of a Few Insurance Facts that are too Important to be Overlooked —Some of the Losses that Should be Provided Against

By E. D. Hardy

Appreciation in Values: Every change affecting economic and industrial conditions must necessarily involve a readjustment of our methods of operation, and in this respect the lumber industry is no exception. The abnormal demand for men in the trenches, as well as in other forms of activity incident to the war, has produced a corresponding shortage of labor which is apparent in almost every form of industry. With the necessity for large production and the demand for male labor, has come the inevitable increase in wages, which is one of the chief factors in determining the cost of production. From the log to the distribution of the finished product a substantial advance in the form of "overhead" must be added, which can only result in higher prices to the consumer.

Further, the scarcity of raw materials and the difficulty of importing goods of foreign manufacture has added substantially to the cost of every form of construction. Without a corresponding adjustment of the usual forms of indemnity to new values, it becomes at once apparent that any loss sustained by fire might easily result in serious disaster.

Every fire teaches its own lesson. The increasing nazard to lumber plants characteristic of the summer months calls for earnest thought and consideration on the part of every lumberman as to the effect which a fire in his own plant at this time would produce.

If the experience of those who have already been visited by this common enemy could be utilized to the advantage of those who have so far escaped the ravages of fire, a great deal of unnecessary financial loss and worry could be avoided.

It is not sufficient to know that your insurance is placed with good companies. Without adequate protection and a proper distribution of insurance to the values which a policy is intended to cover, no insurer can expect to recover the full amount of any loss which he may sustain. Too many lumbermen have overlooked the necessity of adjusting their insurance to the abnormal increase in present-day values, with the result that a fire leaves them with a substantial monetary loss, even after the total indemnity afforded by their insurance policies has become exhausted.

No insurance policy can fully compensate the owner for the loss of a plant returning a reasonable and consistent profit. Through the usual means provided for that purpose it is possible to indemnify yourself against the property loss based on the replacement value less depreciation for age and ordinary wear, and in the case of lumber and other materials an opportunity is also provided through the medium of insurance for recouping a loss on the basis of the market value, provided such property is insured in full.

Consequential Loss: At best, however, the usual form of insurance offers only partial protection, as in the case of a manufacturing plant the interruption of trade and the delay in rebuilding is often the most serious loss to the owner.

With a view to meeting the demand which has arisen through the so-called "Consequential Loss" a form of insurance commonly known as "Use and Occupancy," but more properly defined as "Interruption Indemnity," has been provided.

Since the war, the difficulty of securing building materials and the delay in procuring equipment necessary for the complete operation of lumber plants has created an unprecedented demand for this form of indemnity, which is intended to reimburse the assured for the loss in the earning power of the plant during the period or reconstruction and unproductiveness. The rate for this form of insurance is usually slightly less than the premium charged for protection against fire, and is the only means by which the assured can secure even partial immunity from the pecuniary loss consequent upon the happening of a fire which destroys in whole or in part the possibility of further production until the damage can be repaired.

Unprotected Profits: The sudden advance in the cost of certain classes of lumber has left a substantial margin between the purchase price and the market value of the same stock at the prevailing prices of lumber at the present time. This amount represents a substantial profit to the lumberman who is successful in marketing his stock, but in the event of a fire before the lumber is sold it is at once apparent that this anticipated gain might easily be wiped out, thereby suddenly converting a supposed profit into an actual loss.

To meet the legitimate requirements of the trade in this respect, the insurance companies have recognized the demand for indemnity to protect the assured against such loss, which is properly known as "Profit Insurance," the rate of which usually follows the rate under the fire policies, but which in some companies may be obtained at a slight reduction.

In no form of enterprise is the necessity for adaptability to new conditions more apparent than in the business of insurance. That the insurance companies have gone a long way in adjusting themselves to the needs and requirements of the lumber and other industries in helping them to cope successfully with each new situation, is apparent from the different forms of indemnity available.

While the different forms of indemnity indicated above offer a partial measure of security to the large investors of capital, there is nothing to warrant the assumption that a fire should be encouraged as a means of advantage to the man who has insurance. On the other hand, experience has invariably shown that the best form of protection is fire prevention, which consists in eliminating, in so far as possible, the causes of fire. Even after every reasonable safeguard to prevent the destruction of property has been taken, and every available form of insurance exhausted, there still remains the fallible human element which can only be counteracted at the price of eternal vigilance.

Thirty-Two Inch Lath

As a problem in economics there is nothing in the building line more interesting than the use of 32-inch plastering lath. That the demand for them is not greater is simply a matter of prejudice. The dealer refuses to buy them because the plasterer will not use them, but if it were properly demonstrated that it would be a matter of considerable saving to him—that he could pay his lather a handsome premium for putting them on and still be "ahead of the game" it would soon overcome his objection to their use.

Thirty-two-inch lath can be bought for less than half the cost of the standard 4-ft. lath. They can be sold to the trade at a profit equal to what is usually made on the 4-ft. lath and, owing to the lower cost, net a per cent. of profit more than double that made on the 4-ft. lath.

Studding are generally placed 16 inches, center to center, so there is no more waste to 32-inch than 4-ft. . It is simply the matter of a hand-full more nails to the thousand and a little extra labor in putting on.

As an example let us take a small job requiring, say, 10 M. 4-ft. lath. The retail price in most markets for No. 1 white pine lath is $7.00 per M.

10 M. 4-ft. lath at $7.00	$70.00
To cover the same surface will require 15 M. 32-inch lath at $3.50	52.50
	$17.50

Showing a saving in favor of the 32-inch lath of $17.50 (less the extra expense of puting them on). This is the saving to the plasterer.

Now the dealer not only makes the greater per cent. profit on the 32-inch lath but he also does fifty per cent. more business, as it requires half again as many 32-inch lath to cover the same surface.

Have you ever figured this proposition over? It is worthy of your time and if properly placed before your customer will result in increased sales of the short lath with a greater profit to both your customer and yourself. The mail-order houses are making great use of this economy and it may be well for you to look into the question.—Wood Construction.

The recovery of potash from wood ashes is on a profitable basis in a number of plants in the United States at the present time. The other principal industrial source of potash is as a by-product in the cement industry, although only a few of the cement manufacturing companies are recovering this waste from their dust. The Riverside Portland Cement Company, located in southern California, is, however, recovering six pounds of potassium sulphate for every barrel of clinker burned, worth, at present prices, 40 to 50 cents, and worth 18 cents at the pre-war price of 3 cents a pound. The process, therefore, will be a profitable one even at ordinary prices for the potash.

Nova Scotia Lumbering and Shipbuilding

Ups and Downs of Two Great Industries—Vessel Construction Now Extensive—Deal Production Restricted by War Situation

By Elihu Woodworth

A VERY important change in the conditions of the lumber trade of the Maritime Provinces has been caused by the great war. The trade has experienced many changes but most of them have caused, little inconvenience to the shippers, for they consisted chiefly of evolutions of the method of carrying lumber across the Atlantic. Thirty years ago the lumber from these provinces for the United Kingdom was exclusively carried by square-rigged sailing vessels, and as wooden shipbuilding was then a flourishing industry, there was no lack of carriers. The facilities for handling lumber at that time would be considered totally inadequate to-day, and the result was that the shipment of the season's output was a somewhat tedious process. Lumber ports were thronged with vessels taking on or waiting for cargoes, and in Parrsboro Roads—to mention one port—a score of ships and barques might frequently be seen at one time. But a change was at hand, and in the course of a few years the tramp steamer had practically driven the sailing ship out of the lumber trade and forced it to seek employment elsewhere. Some of the oldest ships were hauled up and left to rot, some were sold to the Norwegians and some of the largest and best had their upper masts taken down and were converted into barges for carrying coal or gypsum. The building of square-riggers was discontinued and many shipyards were closed, but a few of the shipbuilders turned off an occasional vessel for the coasting and South American trade. These were chiefly three-masted schooners, ranging from two hundred to four hundred tons register, with now and then a four-master of greater tonnage. Meanwhile the fishing fleet along the Atlantic coast was kept up to its full strength and efficiency and even increased in number and tonnage by the addition from year to year of a number of smart-looking and fast-sailing yacht-modelled schooners of about one hundred tons register. By constructing coast vessels and "Burgess Model" fishing schooners the shipbuilding industry was kept from extinction, but it was practically dead in some parts of the country, and in very few places did it approach its former glory and importance. Lumber operators found it more profitable to prepare deals and scantling for the British market than to get out ship timber and planks for which the demand was very uncertain; the trade with the United Kingdom seemed to be firmly established, carriers could be had whenever wanted and competition kept the freight rates within reasonable limits. No one wanted to buy wooden ships and it became increasingly difficult to get charters for them. The inducements to build wooden ships were becoming fewer every day and it looked as if that industry was doomed.

War's Effect Upon Shipbuilding

Then came the war, the first trouble the lumber dealers experienced was in obtaining bottoms. The steamers were required elsewhere and very few could be obtained on any terms to carry lumber. The square-riggers—once the sole reliance of the shippers—had become almost as extinct as the dodo. True, there was quite a fleet of tern schooners, but the wise men of the sea declared that no fore-and-aft rigged vessel was fit for an ocean carrier. The demand for bottoms became more imperative, freights began to soar above all former experience, and finally some of the schooner owners decided to try the experiment of sending their vessels overseas. The first voyages were eminently successful and these trial trips compared very favorably with the best work that had been done by the ships and barques of former years. Freights continued to ascend beyond the wildest dreams of other days and in a short time every available schooner was under charter to carry lumber to the British market. But now the trouble was that there were not schooners enough, and some shipbuilders saw their opportunity. In shipyards which had been carried on in a half-hearted manner the work was pushed with new vigor; in others, which had been silent for years were suddenly heard the sounds of active life. It was difficult to obtain the required amount of labor, for many of the workmen of former years had become too old to ply their calling, and many of the younger shipwrights had gone overseas to do their bit for their country. The shipbuilders, however, rose to the occasion and did the best the circumstances would permit. Some fine vessels were turned off and added to the lumber fleet, and others were being rapidly constructed. A few vessels were destroyed by the U boats, but the abnormal freight rates made the risk worth taking.

The demand for lumber in the British market was unabated and the French Government was buying some large cargoes. Shipbuilding was increasing rapidly all over the country, the lumber operators made strenuous efforts to secure a large output, and the signs of the times appeared to indicate a prosperous season. Then came the greatest change of all—a change that practically closed the markets of Europe to Canadian lumber. Early this year the Imperial Government gave notice that no lumber would be allowed to leave Canada for overseas without a special permit. A few cargoes were shipped from Halifax and St. John, but no shipments were permitted from any port after the first of May. One result of this drastic war-time regulation is that the lumber shippers are left at midsummer with the greater part of the season's cut on hand. Last winter was exceptionally favorable to lumbering operations, and, although labor was scarce, approximately an average cut was got out. The quantity of lumber held over from last year was probably larger than usual, owing to the scarcity of bottoms, and it looks now as if the shippers would have to face the coming winter with larger stocks on hand than ever before. Practically all the deals of this season's cut remains unshipped, although quite large quantities were sold to the French and Imperial Governments for spring delivery. At present there is no prospect of this lumber being moved, but, of course, it may be sent for before the season closes. Efforts have been made to secure a market for deals elsewhere, but considerable time is required, as a general rule, to change the channels of trade. One large schooner load of deals was shipped from Parrsboro to New York this summer—probably the first cargo of deals ever shipped from this province to an American port. The returns are said to have been fairly satisfactory, but the introductory shipment has evidently created no great demand, for no other cargoes have yet followed it. Some logs, which under ordinary conditions would have been made into deals, have been cut into planks, and have thus found a market in the United States. Small quantities of hardwood lumber have been shipped by rail to American cities with a prospect of more being wanted. Hardwood lumber has hitherto gone exclusively to the British market.

Turning to United States Lumber Markets

The forest products which for years past have found a ready market in the United States consisted almost entirely of spruce boards, scantling, laths and piling, with an occasional cargo of maple logs for lasts, or of spruce poles for flagstaffs, boat masts and clothes props. Pulpwood was shipped in large quantities some years ago, but is no longer exported. The market has been fully up to the average this season, but there are doubts concerning its continuance, for the war is likely to check ordinary building operations. Meanwhile the lumber in demand is being shipped as rapidly as vessels can be procured, and it is probable that very little stock suitable for the American market will be carried over. None the less, however, the future of the lumber trade presents a serious problem. What will become of the deals is a question no one can answer, but the answer seems to depend very largely upon conditions in England and France. If those countries can do without our lumber it will have to be held over; if they must have it they will find some way to get the greater part of it. A curious feature of the situation is that Canadian lumbermen have been instrumental in destroying the Canadian lumber trade for the time being. England and France could scarcely have gone as long without outside lumber if it had not been for the efficient aid rendered by the forestry battalions, and some of these battalions were recruited almost exclusively from the sturdy lumberjacks of the Maritime Provinces. They have already manufactured large quantities of lumber in England and France, and if they can cut enough to supply pressing demands for next winter it follows that Canadian deals will have to remain where they are. If this should be the case it will be a serious matter for the lumber interests of the country. With big unsold stocks on hand and no certainty of a market next year there will be little inducement to send men into the woods to add to the unsold and possibly unsaleable piles of lumber which must be held over. Of course, there will be some lumber cut next winter, but unless the prospect improves, the most of the lumbering will be done by small operators, or as a sort of side line by farmers who have timber limits. High wages and the greatly advanced cost of supplies make the risk greater in any case and will no doubt have a tendency to keep operators from taking chances. Undoubtedly there will be a big demand for Canadian lumber at no very distant date, but no one appears to be able to tell just when that date will be. Therefore,

unless in the course of two or three months there are reliable indications of a strong demand for our lumber overseas the output in the Maritime Provinces will undoubtedly be the smallest it has been for many years. This will throw a number of men out of employment, but it will also afford the shipbuilders an opportunity to obtain at least a portion of the labor they need. The shipbuilders have no trouble about a market, for they can sell at big prices all the vessels they can build, and they could sell many more if they were in a position to build them. Wooden shipbuilding has always been closely associated with the lumber trade and has passed through many vicissitudes. Once a prosperous occupation second to none in the land, it descended by degrees until it became scarcely worthy of notice, but once more its fortunes have advanced and its prospect are far more promising than those of the once prosperous lumber trade.

Newfoundland Industries All Prosperous

Output of Lumber Increased—Shipbuilding Enjoying a Revival—Labrador Forests Attracting Attention of Pulp and Paper Manufacturers

By J. Wilfrid McGrath

THE logging season of 1916-1917 will stand as one of the most successful in the history of lumbering in Newfoundland. The loggers had a good start in the early fall of 1916, with a keen frost followed by a few inches of heavy snow which remained during all the winter months, even until late this spring. The cut undoubtedly was by far the largest we have ever had and the different grades and quality of timber the most diversified. There was a considerable falling off in the amount of pit props cut as compared with the previous season, owing to a scarcity of tonnage to convey same to the Old Country, but all the pulp and paper mills increased their stock of wood by some thousands of cords, whilst all of the sawmills considerably increased their output. The great and marked activity in the building of wooden ships for our coastwise and foreign trade has been the means of extending the lumbering operations to certain sections of our forests, which for years have remained idle. Newfoundland possesses vast areas of the finest of white and red birch, tamarack, locally known as juniper, and witch-hazel. No finer wood can be had for the frames and planking of vessels, than these. Newfoundland birch and juniper are the equal of the best American hardwoods. Hitherto very little of this class of timber was cut annually, as seemingly only small quantities found use amongst the people of Newfoundland in their respective industrial pursuits. Shipbuilding for some years had become almost extinct, as our fishermen preferred having American or Canadian-built vessels for their work; but, owing to conditions brought around through the war, a great revival in shipbuilding has sprung up over all parts of the country, in which millions of feet of birch, juniper and witch-hazel will be used. Thus large sections of forests which remained idle for years, and apparently of no commercial value, are now being used to good account and together with all other "little bits" throughout the Empire will help to win the war. The introduction of our birch wood into the shipbuilding industry may be the means of finding other and profitable uses for it. It seems to me that this wood when properly seasoned could be extensively used in the manufacture of furniture, etc., and seeing that some of the large manufacturers' associations of America have started a campaign of advertising—"birch is birch, not mahogany," there is food for reflection in such an idea, and it is one that mill owners and lumber merchants in this country may take profitable advantage of.

The season's cut of pine, spruce and fir was twenty-five per cent. greater than last season's, and with good driving all logs were brought to the mills early, with little or no delay, and with no additional expense. All over the country, the mills are now sawing full time, and some day and night, cutting up the logs into different sizes and grades. There is a ready and an available market with excellent prices for all that has been cut without going outside the country to sell one cargo.

The following is a list of the prices that were paid locally for Newfoundland stocks in July:—

Lumber

Juniper	Per M. feet	$25.00 to	$30.00
Shingles, cedar, No. 1	Per M. pieces	4.50 to	5.50
Laths	Per M. pieces		4.00
Palings	Per M. pieces	2.00 to	2.60
Spruce boards, No. 1	Per M. feet	20.00 to	25.00
Spruce plank, joisting	Per M. feet	25.00 to	30.00
Studding and scantling	Per M. feet	20.00 to	30.00
1 in. p and t spruce flooring	Per M. feet	25.00 to	30.00
1¼ in. p. and t. spruce flooring	Per M. feet	28.00 to	32.00
1½ in. p. and t. spruce flooring	Per M. feet	28.00 to	32.00
Pine boards, clear	Per M. feet	50.00 to	60.00
Hardwood plank	Per M. feet	30.00 to	35.00

With the advent of the United States to join the allies in the war, much activity has been revived by parties in that country in connection with the development and utilization of the extensive forests of Newfoundland, Labrador, and it is quite possible that this summer two or more large rossing plants will be established in that country. The idea prevailing at present with those who own timber lands in that country is to bark the wood and in that condition ship it to the pulp and paper mills in the New England States. This, no doubt, would be the means of relieving a great want so much felt at present by most mill owners in the United States, as from year to year the difficulty of securing an ample and permanent supply of wood for the manufacture of pulp and paper is becoming more and more acute. In the forests of Labrador quite adjacent to the tidal waters at the head of its great bays and fiords, there are inexhaustible supplies of wood eminently suitable for pulp and paper manufacture and other industrial works. There should be no obstacles in the way of having this wood shipped from the shores of Labrador to the great seaports of Portland, Boston and New York, which would

Sawmill at Bonne Bay, Newfoundland

Pulpwood stock at Grand Falls, Newfoundland.

become distributing centres for other and more distant places. The sea voyage would be much less in distance than from New York to any of the European countries and the risks would certainly be very much less in comparison with those attending shipping on the other side of the Atlantic during the continuation of the war.

The Pit Prop Industry

The shortage in the cut of pit props last winter was due to the fact that tonnage could not be spared to take this lumber across the Atlantic to England. There is an ever ready market for all kinds of mining timber in the English markets, and since the inception of the war upwards of two million dollars worth of this class of wood has been shipped from Newfoundland to England. It seems to me that the pit prop business, if properly fostered and protected, would eventually become one of the greatest industries of this country, from which the laboring classes would reap millions of dollars annually. It was only since the beginning of the war that one was permitted to export from this country pit props, pulpwood, or what past governments were pleased to call unmanufactured timber. That such an absurd law was permitted to remain in force for numbers of years does not speak much for the intelligence of our legislators. For many years past our lumbermen have been cutting annually millions of saw logs and from these logs, millions of ends; the tops of the trees from two to four inches in the small end were left to rot in the forest simply because we had a law which prevented the exportation of unmanufactured wood. These ends, or tops of trees could be used as pit props, which as a side issue to the lumbering business could be made to yield many thousands of dollars yearly to our people. Again, in large sections of Newfoundland, and particularly in Labrador, the forest growth is so dense and thick that the trees do not attain any great size, so that by cutting out the smaller growth, which would make excellent pit props, you are at the same time doing one of the very best things that can be done for the life, growth and expansion of the other trees. The idea our legislators had in view was that the exportation of unmanufactured timber would not pay as much to labor and revenue as if this same lumber were manufactured in the country. Fortunately, both branches of our legislature, and the people of this country in general, have, within the past few years been disabused of such an idea, through the very clear and concise proofs given by Messrs. J. Noseworthy and B. M. McGrath (father of the writer) in a carefully prepared pamphlet which they issued on this subject, a copy of which was placed in the hands of legislators and business men. The idea prevailing that pit props and pulpwood were to be classed with unmanufactured wood is most absurd. The pit prop and pulpwood exported from this country go through a certain process of manufacturing equally as much as a log sawn into deal. Every stick of pulpwood and mine timber leaving this country is assembled, barked, and sawn square at both ends before leaving, all entailing hand labor which certainly pays the laborer more than the mere mechanical process of manufacturing a log into deals at a mill. It is most pleasant to hear from the Old Country that our wood is most suitable for this kind of work, that the mine owners of England want it and hope we will be able to give them full supplies not only during the war but afterwards. One of the largest buyers of Newfoundland pit props is the well-known firm of Evans & Reid, Limited, of Cardiff, Wales, and their agent here is Mr. J. O. Williams, who in a communication to the press a few days ago, on this subject, wrote as follows:—

"Pit props are the tops of trees which are useless for manufacturing into pulp or lumber. Such countries as Finland, Russia and the Scandinavian countries, are just as anxious to preserve their timber as is this country, but the export of pit props has always been allowed from these countries. The timber industry of all kinds—including the pit prop industry—in these countries is a very large one, many times larger than the industry in Newfoundland, and all the arguments that can be used against the pit prop industry in Newfoundland can with equal effect be used against the industry of these other countries. The fact remains, however, that the industry is not only permitted in these other countries, but is encouraged and is a source of revenue to all those engaged in it and there is no reason why the same conditions should not exist in Newfoundland.

"Were the export of pit props to be prohibited from Finland, Russia, Norway and Sweden, the stuff would be left to rot in the forest, as is actually the case in this country. These other countries have seen the folly of this, have seen that money can be made out of this stuff and have permitted its export. Anyone who is cutting pulpwood or timber in Newfoundland has to leave the tops of the trees from two inches to four inches in the small end, in the forest, and I can never understand why the government prohibited the export of this timber, when instead of letting it rot; it could be turned into a commercial article without injury or loss of any kind. If the government are anxious to protect the wood of the country they can do so by forbidding the cutting of trees below six inches at the base, but no protection whatever is afforded by allowing the tops of the trees to rot in the forests, while they may be turned into money.

"I feel confident that the pit prop industry has come to stay and will eventually turn out a very profitable industry to Newfoundland as it has done to other countries, but it must not be forgotten that those who are prepared to invest their money expect to have their rights protected.

"There is no doubt that Newfoundland can compete with Scandinavian countries and Russia in pit prop industry in normal times, and it must be clear that the pit prop industry, taken in conjunction with the other timber industries, will be a further inducement to people to erect sawmills and pulp mills in Newfoundland when they have a profitable market for the tops of trees. Those in authority must surely see the mistake they have been making in forbidding the export of pit props in the past.

"I believe that if the whole question of the pit prop industry were properly explained to the fishermen of the country, together with what it is worth to them, there would not be one voice against it, and surely an industry which has left over $1,500,000 in the country in such a short time, and provided labor at a time when there is no fishing to be done, ought to receive more consideration than it does and less unjust criticism."

Mr. Williams' long experience in connection with the pit prop trade in Russia and other Scandinavian countries qualifies him to speak on such a matter, and it is to be hoped our government and people will profit by the information he has given.

If those in authority would direct their efforts more to the preservation of our forests from fires, they would be doing a work of untold value to the country. The utter carelessness and neglect which have been manifest from time immemorial with regard to the destruction of our forests by fires, until the present government came into power, was criminal in the first degree. It was wrong to export our timber unmanufactured, but it was no harm to see millions of feet of our best timber and hundreds of miles of virgin forests going up in smoke every year. One forest fire can do more damage in a few days than one thousand lumbermen with axes could do in a life time.

Newfoundland Forestry Battalion

Since the beginning of the war numbers of young men who had taken up by the lumber business in all its phases as a means of making a livelihood have from time to time joined the ranks of Newfoundland's First Regiment, and have gone to fight overseas, many of whom will not return again, thereby causing a shortage of expert labor in this line of business. In addition to this loss we are now forming a battalion of five hundred of Newfoundland's best lumbermen, to proceed to England, who will join with other units there, from Canada and the United States, and be engaged in lumbering in the forests of England. This battalion will be increased from time to time until it numbers one thousand. To make up for this shortage of labor in our timber business, numbers of our fishermen and men from other pursuits of labor, will go into the work, and help as best they can to keep the trade going. Men whose fathers fought with Drake and Nelson, and whose sons fought nobly through the Gallipoli campaign, and bled and died on the plains and fields of France and Flanders—of whom it has been said "they were better than the best," who have been keeping ward and watch through three long weary years out on the stormy death-laden depths of the North Sea and over the broad Atlantic, men whose fathers were not afraid to die, in whose veins runs the best blood of the English, Irish and Scotch races.

A Fine Record of Patriotism

Mr. G. D. Campbell, of the Campbell Lumber Company, Weymouth, N.S., has made a contribution to the fighting forces of the allies which is probably unequaled in lumber circles. His seven sons were among the first to volunteer, and while one of them, the eldest, was persuaded, for urgent business reasons, to remain at home, the remaining six brothers went overseas.

One of their number paid the supreme sacrifice at Vimy Ridge, where Canada's sons won imperishable renown. His brother Duncan, was wounded at the same engagement, but Glidden, another of the dauntless six, went through unscathed and was with the storming party that captured the Ridge.

Colin Campbell was wounded at La Bassee in 1915, and again a year later at Death Valley, near Courcelette. It was at the second engagement that Colin won the coveted Military Cross.

None of the brothers were military men previous to the war, but at the call of the fighting blood of their clan they sprang to arms. Belonging to a clan famed in song and story for its readiness and resourcefulness in war, the true form of this branch of the race is further emphasized by the fact that the six brothers from Weymouth have no less than eleven cousins in the ranks; six in the British army; three in the U. S. army, and two in the U. S. Navy—a grand total of seventeen.

Lumber, Lath and Shingle Output in 1916

A Decrease of 9.2 per cent. in Lumber Production—Average Value Advanced by only 61 Cents per Thousand Feet—Shingle Output Greater

The report upon the production of lumber, lath and shingles in Canada for the year 1916, prepared by the Forestry Branch of the Department of the Interior, will soon be ready for distribution. An advance proof of the report has been furnished to the Canada Lumberman by the Forestry Branch and we are thus enabled to publish the following summary of its chief sections:—

This bulletin gives statistics of production by 2,609 mills operating in Canada during the calendar year 1916. The number of mills reporting decreased by 630 as compared with 1915. The value of the lumber, lath, and shingle output for 1916 was as follows: Lumber, $58,365,349; lath, $1,743,940; shingles, $5,962,933; total, $66,072,222.

Canada cut in 1916, 3,490,550 feet board measure of lumber, a decrease of 9.2 per cent. as compared with 1915.

The cut decreased in all the eastern provinces, and increased in all the western provinces as compared with 1915, British Columbia making the most pronounced gain.

Lumber Cut by Provinces

The following table shows the quantity and value of lumber cut during 1915 and 1916, by provinces:—

Province	Quantity M Ft. B.M. 1915	Quantity MFt. B.M. 1916	Value of Lumber $ 1916	Per cent. inc. or dec. in cut over 1915	Average Value per M Ft. B.M. $ c. 1915	Average Value per M Ft. B.M. $ c. 1916
Total, all Provinces	**3,842,676**	**3,490,550**	**$58,365.349**	**9.2***	**$16.11**	**$16.72**
Ontario	1,035,341	894,050	17,848,675	13.6*	18.99	19.96
British Columbia	669,816	875,937	12,932,711	30.7	12.56	14.76
Quebec	1,078,787	818,523	13,722,883	24.1*	16.49	16.77
New Brunswick	633,518	513,655	8,384,397	18.9*	15.63	16.32
Nova Scotia	294,475	220,718	3,054,309	25.0*	14.83	13.84
Saskatchewan	62,864	84,275	1,189,351	34.1	14.00	14.14
Manitoba	42,357	57,711	850,879	36.2	12.97	14.74
Alberta	17,975	18,350	263,996	2.1	13.60	14.39
P. E. Island	7,543	7,331	118,148	2.8*	15.19	16.12

*Decrease from 1915 to 1916.

Canadian sawmills reported cutting twenty-five different kinds of wood in 1916, which list probably embraces about fifty different species. Spruce, white pine, and Douglas fir have maintained their relative positions as the three leading species for some years without change. In 1916 balsam fir took the place of hemlock which for a good while had held fourth position. Considerable change took place in the year in the order of the twenty remaining kinds of wood, partly because the greater activity of western mills resulted in a greater cut of some western species.

The softwoods contributed 95 per cent. and the hardwoods 5 per cent. of the total production of lumber in Canada in 1916. In 1915 the figures were: Softwoods 94.5 per cent., hardwoods 5.5 per cent. These proportions have remained about the same for several years. Generally speaking, the hardwoods are produced in the eastern provinces, Ontario and Quebec being the main sources of supply. The four leading hardwoods, birch, maple, basswood, and elm, have occupied their relative positions for several years, but in the 1916 list poplar replaces ash in fifth place.

Kinds of Wood Cut

The following table shows the leading kinds of wood cut during 1916 and 1915:—

Kind of wood	Quantity 1915 M Ft. B.M.	Quantity 1916 M Ft. B.M.	Per cent. of Inc. or Dec. over 1915	Total Value of Lumber 1916 $	Average Value per M Ft. B.M. 1915 $ c.	Average Value per M Ft. B.M. 1916 $ c.
Total	**3,842,676**	**3,490,550**	**9.2***	**$58,365,349**	**$16.11**	**$16.72**
Spruce	1,564,113	1,340,678	14.3*	21,201,198	15.24	15.81
White pine	849,196	719,140	14.3*	14,957,048	20.71	20.80
Douglas fir	453,534	574,626	26.7	8,070,200	11.76	14.04
Balsam fir	233,521	180,349	22.8*	2,679,494	14.25	14.86
Hemlock	238,992	177,354	25.8*	2,583,566	13.69	14.57
Yellow pine	35,166	92,698	163.6	1,455,396	13.02	15.70
Cedar	67,366	91,375	35.6*	1,666,455	17.40	18.24
Birch	85,733	81,543	4.9*	1,478,970	16.77	18.14
Red pine	122,387	61,653	49.6*	1,175,835	18.03	19.07
Tamarack	36,192	40,031	10.6	630,642	13.59	15.75
Jack pine	31,283	37,929	21.2	652,353	15.39	17.20
Maple	47,418	32,402	31.7*	639,182	17.89	19.73
Basswood	24,382	18,616	23.6*	373,592	20.06	20.07
Elm	23,795	15,750	33.8*	324,582	19.10	20.61
Poplar	9,324	9,064	2.8*	134,591	12.21	13.75
Ash	9,647	6,516	32.5*	126,608	18.71	19.43
Beech	5,343	6,403	19.8	102,762	16.47	16.05
Oak	3,166	3,149	0.5*	92,541	28.36	29.39

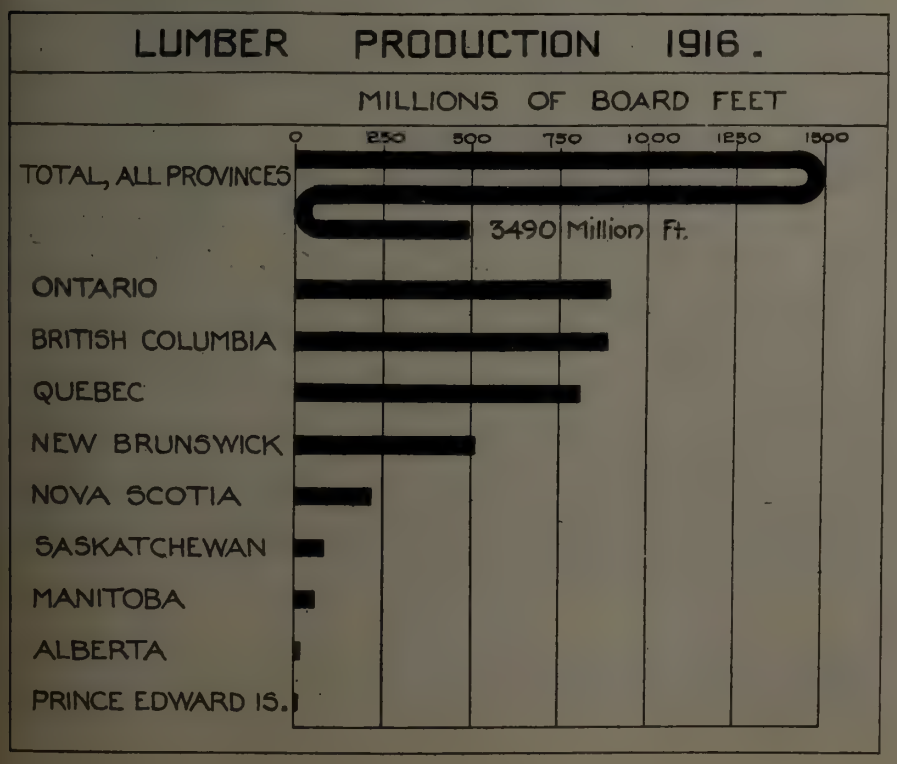
*Decrease from 1915 to 1916.

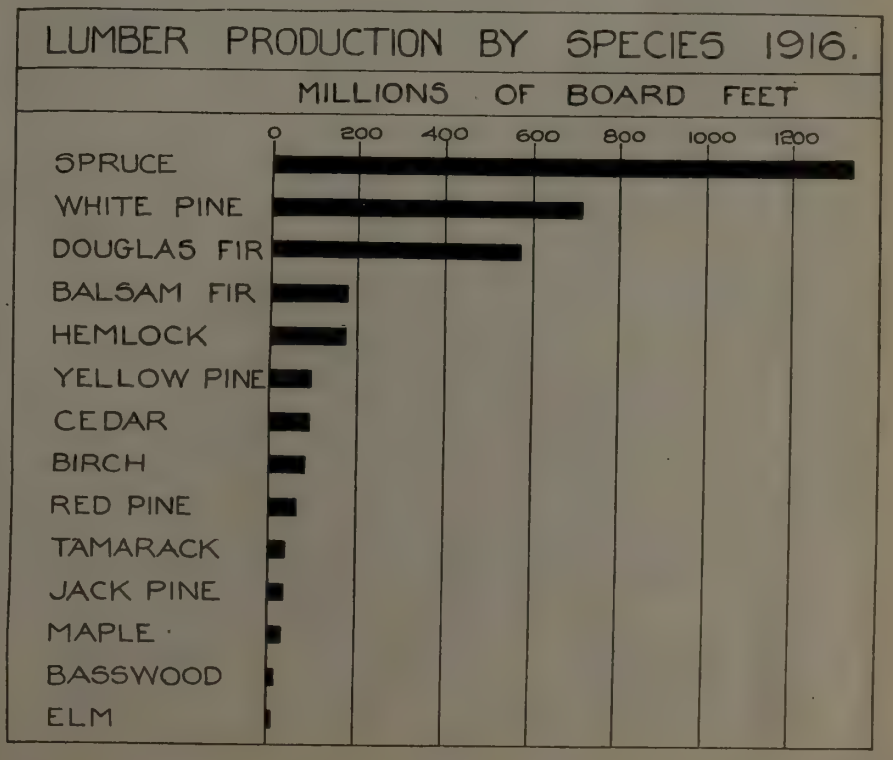
Spruce Production

The production of spruce during 1916 and 1915, by provinces, was as follows:—

Province	Quantity 1915 M Ft. B.M.	Quantity 1916 M Ft. B.M.	Total Value 1916 $	Average Value Per M Ft. B. M. 1915 $ c.	Average Value Per M Ft. B. M. 1916 $ c.
Total	**1,564,113**	**1,340,678**	**$21,201,198**	**$15.24**	**$15.81**
Quebec	599,811	497,241	8,075,194	15.41	16.24
New Brunswick	519,699	426,544	6,923,496	15.66	16.23
Nova Scotia	184,922	144,263	2,015,924	14.61	13.97
Saskatchewan	61,970	84,134	1,187,054	14.00	14.11
Ontario	84,095	65,484	1,186,162	16.33	18.11
Manitoba	39,386	55,741	824,554	12.86	14.79
British Columbia	56,360	49,077	719,687	13.60	14.66
Alberta	13,991	14,772	213,668	13.53	14,46
Prince Edward Island.	3,879	3,422	55,459	15.20	16.21

Spruce is the most important lumber tree in Canada. White





spruce is gradually taking the place of pine for lumber. It has the further advantage of being the chief source of supply for the manufacture of woodpulp. It is also used for cooperage, mine props, railway cross-ties, posts, and rails. Red spruce, which is confined to the eastern provinces, is sometimes preferred for interior finish to the more widely distributed white spruce. Black spruce, owing to its greater hardness and density, is preferred for mining timber and ties. Sitka spruce, a native of the Pacific coast, has the same uses as the other species and is also used for large structures owing to the larger sizes in which it can be obtained.

White Pine Production

White pine was long the leading commercial tree of Canadian forests. Its lightness, softness, straightness of grain, and quality of holding its shape make it a favorite with woodworkers.

The production of white pine during 1916 and 1915, by provinces, was as follows:—

Province	Quantity 1915 M Ft. B.M.	Quantity 1916 M Ft. B.M.	Total Value 1916 $	Average Value Per M Ft. B.M. 1915 $ c.	Average Value Per M Ft. B.M. 1916 $ c.
Total	**849,196**	**719,140**	**$14,957,048**	**$20.71**	**$20.80**
Ontario	623,119	604,562	12,549,487	20.38	20.76
Quebec	157,256	60,439	1,428,174	22.68	23.63
New Brunswick	35,507	32,525	638,764	18.54	19.64
Nova Scotia	25,591	16,354	254,260	21.06	15.55
British Columbia	7,664	5,021	81,048	15.51	16.14
Prince Edward Island.	59	239	5,315	20.27	22.24

Douglas Fir Production

Douglas fir timber and lumber is constantly growing in importance in Canada. It is particularly strong in the qualities which go to make up an ideal structural timber. While the strength and large dimensions in which it can be obtained make it a favorite in the structural field, it is becoming popular for decorative purposes owing to its attractive grain.

The production of Douglas fir during 1916 and 1915 was as follows:—

Province	Quantity 1915 M Ft. B.M.	Quantity 1916 M Ft. B.M.	Total Value 1916 $	Average Value Per M Ft. B.M. 1915 $ c.	Average Value Per M Ft. B.M. 1916 $ c.
Total	**453,534**	**574,626**	**$8,070,200**	**$11.75**	**$14.04**
British Columbia	453,415	574,382	8,067,168	11.76	14.04
Alberta	119	244	3,032	12.31	12.43

Balsam fir:—Balsam fir is gaining rapidly in importance. It now forms a large part of the supply of pulp-making material and is also increasingly used for lumber. It is light, soft, and even-grained, but not strong. It is not so durable as most other coniferous woods. The output of balsam fir was 180,349,000 feet in 1916 and 233,521,000 feet in 1915. The 1916 value was $2,679,494.

Hemlock:—Hemlock is used for rough building construction and for boxes, crates, ties, and poles. Tanning extract is secured from the bark. The wood of the western species is superior to the eastern. It is easier worked and gives a smoother surface. Both species are used to some extent in pulp-making. The output of hemlock was 177,354,000 feet in 1916 and 238,992,000 feet in 1915. The 1916 value was $2,583,566.

Yellow pine:—The wood of the yellow pine is structurally similar to that of the red pine of eastern Canada. The wood in regard to strength, hardness, and ease of working comes between white pine and red pine. Generally speaking, it is being used as a substitute for white pine. This wood was produced only in British Columbia, as follows: 1916, 92,698,000 feet; 1915, 35,166,000 feet. The 1916 value was $1,455,396.

Cedar:—Eastern white cedar possesses, in a high degree, the quality of durability in moist situations. Like white pine, it swells and shrinks very little with changes in humidity in the atmosphere. It is easy to work and has a fine, straight grain. Western red cedar is lighter, softer, and weaker than white cedar, but as it is more abundant than eastern cedar and obtainable in larger dimensions it is in growing demand. The production of cedar was 91,375,000 feet in 1916, and 67,366,000 feet in 1915. The 1916 value was $1,666,455.

Birch:—The various species of birch produce more lumber than any other Canadian hardwood tree. The wood is used for flooring, interior finish, furniture, and for a large number of small articles such as spools, clothes pins, and toys. The production of birch was 81,543,000 feet in 1916, and 85,733,000 feet in 1915. The 1916 value was $1,478,970.

Red pine:—Red pine is stronger and heavier than white pine, and, therefore, more valued for structural purposes. It is more difficult to work than white pine and is used largely for heavy structural framework. It is also used for paving blocks and framework of agricultural implements. The production of red pine was 61,653,000 feet in 1916 and 122,387,000 feet in 1915. The 1916 value was $1,175,835.

Tamarack:—Tamarack, or larch, resembles, in its structure, Douglas fir or southern pine. It is hard, strong, and heavy. It is used in ship-building and for ties and poles. The western species, while somewhat lighter, is used for the same purposes. Tamarack was produced in all the Canadian provinces during 1916, the total being 40,301,000 feet as compared with 36,192,000 feet in 1915. Most of the output—36,651,000 feet, was produced in British Columbia.

Jack pine:—Jack pine wood compared with that of other pines is soft, weak, and brittle. The tree is abundant, however, and the wood is largely used for railway ties, mine props, and pulpwood. As lumber, it is used for rough construction, boxes, and crates. The total output of jack pine in all provinces in 1916 was 37,929,000 feet, valued at $652,353, as compared with 31,283,000 feet in 1915. Ontario led in jack pine production with 17,520,000 feet, Quebec following with 9,622,000 feet, and British Columbia coming third with 7,242,000 feet.

Maple:—Maple is hard, stiff, and difficult to season, but if properly seasoned holds its shape well. It has a great diversity of uses. It is used for flooring, furniture, agricultural implements, vehicles, and handles. The total output of maple was 32,402,000 feet, valued at $497,144, as compared with 35,311,000 feet in 1915.

Basswood:—Basswood is soft, light, and weak, but is tough, has a fine even texture, and is easy to work. It is used for interior work of buildings, also for vehicles, furniture, coffins, and small woodenware. The output was 18,616,000 feet, valued at $373,592, as compared with 24,382,000 feet in 1915.

Elm:—Rock elm is the strongest and most valuable of the elm cut in Canada. Red elm is at the opposite extreme, while white elm, the most aboundant of the three, has qualities between the two. Most of the elm cut is used in the slack cooperage industry. It is also used in the manufacture of agricultural implements, boats, and vehicles, and for building purposes. The production amounted to 15,750,000 feet, valued at $324,582, as compared with 23,795 feet in 1915.

The poplars:—The cottonwoods are the most valuable of the poplars, being light, soft, and easily worked. The wood resembles that of basswood, but is softer and tougher. Poplar wood is used for boxes, crating, excelsior, baskets, wood-pulp and rough construction. The output of all kinds of poplar was 9,064,000 feet in 1916, valued at $124,591, as compared with 9,324,000 feet in 1915.

Ash:—White ash is one of the toughest and most elastic of Canadian woods. It is used in the manufacture of light vehicles, agricultural implements, and handles. Black ash, having an attractive grain, is used for cabinet work. The output was 6,516,000 feet, valued at $126,608, as compared with 9,647,000 feet in 1915.

Beech:—The wood of beech is hard, tough, strong, and heavy. It is difficult to season but properly seasoned holds its shape well. The greater part sawn in Canada is used for flooring and moderately priced furniture. It is also used to some extent for vehicles and boats. The output was 6,403,000 feet, valued at $102,762, as compared with 5,343,000 feet in 1915.

Oak:—Twelve species of oak reach tree size in Canada, but only red and white oak are sawn in commercial quantities. The bulk of this lumber is used for furniture and interior finish for houses. It is also used in the form of veneer, and in the manufacture of tight cooperage, agricultural implements and other articles that demand a heavy, strong, and durable wood. The output was 3,149,000 feet, valued at $92,541, as compared with 3,166,000 feet in 1915.

New Board to Regulate U. S. Freight Car Distribution

Creation of a division of car service to insure prompt movement, distribution, exchange, interchange and return of freight cars was announced on July 12 by the Interstate Commerce Commission of the United States. The creation of the new division is the first definite government step for permanent supervision of traffic movements under the recent amendment to the act to regulate commerce. The urgent necessity for regulation in the distribution of cars has been pointed out to the commission many times by both shippers and carriers. Despite the efforts of the railroads, certain sections have suffered more than others from shortages. The carriers have appointed local car service committees at 25 points and the National Industrial Traffic League has named similar bodies representing shippers at the same points. These committees will hold joint meetings to insure prompt and efficient adjustment of local traffic problems. The new division will develop field forces quickly and probably will place agents in many of the great traffic centers to facilitate adjustments in local shortages, congestions, and other problems. Through this division the commission will regulate car service throughout the country through direct orders to the carriers, with the purpose of dealing with car shortage and seeing that troops, war materials and necessary supplies are moved promptly.

Mr. M. J. McNeil has opened an office at 43 St. Sacrament Street, Montreal, as a wholesale lumber dealer, chiefly in dimension timber. He was previously with the late Mr. John Sunstrum, of Ottawa and Montreal.

Savoie & Co.'s Plant, Manseau, P.Q.

Savoie & Co.'s Expanding Operations

One of the best-known firms of lumber manufacturers and merchants in Quebec is that of Savoie & Co., Manseau, Nicolet County, P.Q., an illustration of whose plant is published herewith. In 1904 Mr. J. A. Savoie, director of the firm, went to Manseau from Brompton Falls. In the same year the company purchased 21,000 acres of timber land near Manseau. Since that time they have been producing 3,000,000 feet of lumber, a few thousand cords of pulpwood, 3,000,000 lath, and 2,000,000 shingles annually at Manseau. The company also operate a general store. The business of Messrs. Savoie & Co. has been increasing from year to year, and they now expect, having purchased a few thousand more acres of timber land, to be operating at this point for at least ten years more.

For two years past Messrs. Savoie & Co. have been carrying on a transit business, and have obtained numerous customers of this nature in Montreal, Toronto, and the United States. The capacity of their dressing mill is 25,000 feet per day. During 1917 they have received so many orders of this class that they have hardly been able to handle the stock coming in from day to day.

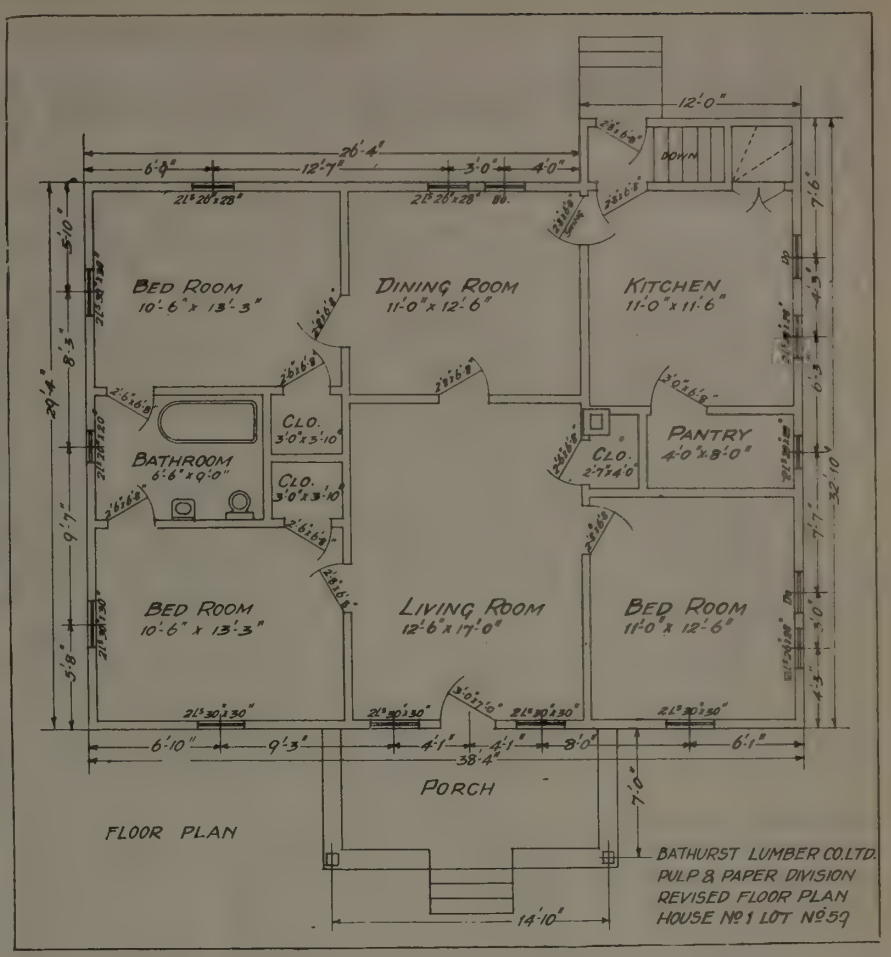
Hon. F. T. Savoie, president of the company, is director and manager of the Savoie & Guay Foundry, Plessisville, P.Q., which has been employing 200 men upon the production of shells during the past two years. Hon. F. T. Savoie was a member of the House of Commons at Ottawa from 1904 to 1911 and of the Quebec Legislature from 1911 to 1913.

Mr. J. Alf. Savoie, director, also operates a retail store at Plessisville, P.Q., and is well known throughout the province. Before going to Manseau he owned and operated a sawmill and a cheese box factory at Brompton Falls, P.Q.

Bathurst Lumber Company's Houses for Employees

Owing to the abnormal growth of Bathurst, N.B., resulting from the rapid development of the pulp and lumber industry, there is at present a great dearth of dwelling houses, and rents are at a premium. Last summer, several hundred new houses were erected, besides a large number of additions to those already in existence, and this season will see a further, and probably greater, increase.

As the growth in population is largely due to the sulphite and craft pulp mill erected by the Bathurst Lumber Company, Limited,



that concern has interested itself in the providing of available accommodation for its constantly growing army of workmen. On a piece of land adjacent to the mill a number of bungalow houses have been erected. Each dwelling is built upon a concrete cellar of its own size and is supplied with water and light, the latter being derived from the company's electric plant. The demand for such desirable premises is naturally large and the company plan to extend the work considerably this season.

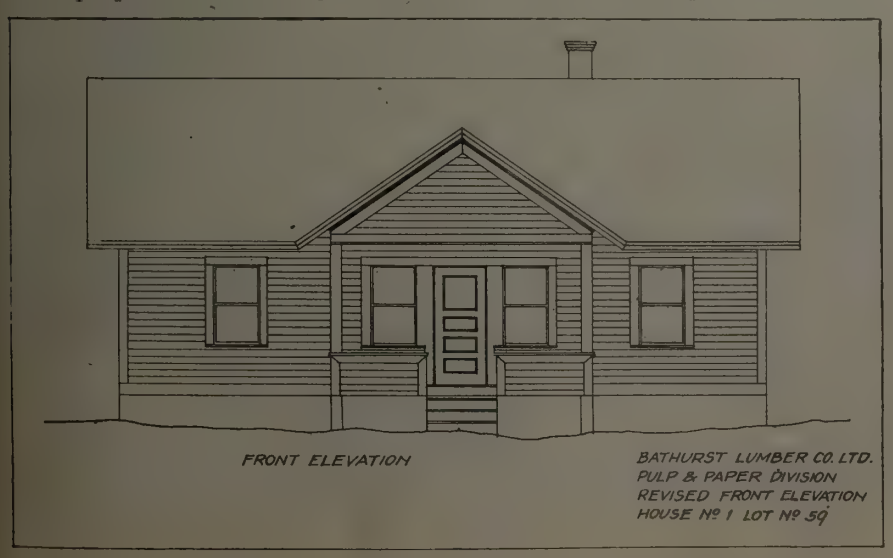
Particulars of the new dwellings are shown in the accompanying plans.

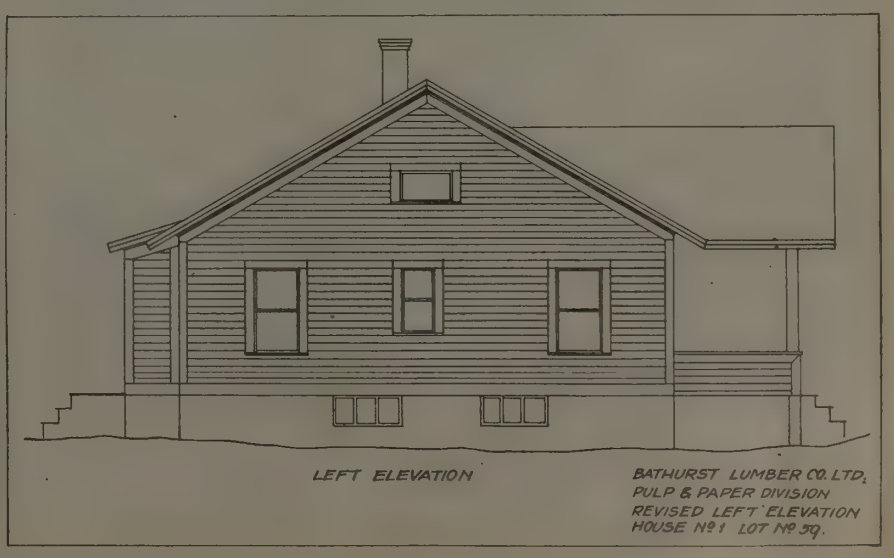
Forest Fires Starting in B. C.

Recent despatches from several points in British Columbia, tell of forest fires commencing. Ten miles east of McBride, B.C., a forest fire broke out, resulting, it is said, from fishing parties not extinguishing their camp fires. All section gangs and extra gangs were sent out to fight the fire, but heavy winds made the work very difficult. The latest report stated that the fire had been burning for four days and was spreading into valuable timber and making its way along the sides of the mountain and along the Shushwap Valley.

A despatch from Nelson, B.C., states that forest fires were spreading rapidly during the fourth week of July, and that the woods were very dry. There had been no rain since June 24th. Later despatches on July 25th stated that the fire in the Trail and Summit Lake districts had been got under control, and also fires in the Corbin and Bull River districts. A large number of men had been available to fight the flames.

In the State of Washington a forest fire was reported which was heading towards Patterson, B.C., near Slocan City.





The British Columbia Lumber Industry

Successful Development During the Past Year in the Face of Many Abnormal Difficulties—Broadening the Export Markets

Written specially for the Canada Lumberman by Hon. T. D. Pattullo, Minister of Lands for British Columbia

AN increase in production of 29 per cent. over the previous year is the record of the British Columbia lumber industry for 1916. The demand calling for this increased production came largely from the prairie provinces and Eastern Canada. The production of shingles and boxes increased considerably, the latter accounting for a total value of nearly $2,000,000.

The early part of 1916 witnessed abnormal weather conditions curtailing production to a point far below the demands of the market. At the same time the beneficial effect of the 1915 prairie crop and eastern industrial requirements were shown by the large orders coming to our mills. British Columbia thus had in the early part of 1916 a very difficult problem to face.

Labor shortage, abnormally bad weather, high prices of, and difficulty in obtaining supplies of all kinds for the camps and mills combined to restrict the output and raise the cost of production. Western energy, however, grappled successfully with the problem, and the balance of 1916 witnessed a remarkable increase in volume of production.

The total quantity of lumber cut in British Columbia in 1916 amounted to 1,280,263,000 ft. B.M., with a value of $35,528,000, compared with a production in 1915 of 99,780,200 ft. B.M., valued at $29,150,000.

The following table shows the value of the forest products produced in British Columbia for the past four years.

Value of British Columbia Forest Products

	1913	1914	1915	1916
Lumber, Coast	$20,400,000*	$15,500,000*	$15,500,000	$21,075,000
Lumber, Interior	6,400,000	3,750,000	.....	.....
Pulp	3,000,000	2,730,000	3,200,000	3,520,000
Shingles	550,000†	650,000†	3,500,000	4,500,000
Boxes	.....	.....	750,000	1,833,000
Piles and poles	400,000	900,000	1,200,000	650,000
Mining-props and posts	250,000	300,000	400,000	1,000,000
Miscellaneous (cut by railroads, mines, settlers, cordwood, etc.)	1,000,000	1,200,000	900,000	1,150,000
Additional value contributed by industries, etc.	1,000,000	1,900,000	1,750,000	1,650,000
Product of Dominion lands	450,000	1,600,000	1,800,000	‡
Lath	200,000	150,000	150,000	150,000
Totals	$33,650,000	$28,680,000	$29,150,000	$35,528,000

*Includes shingles cut from logs. †Includes shingles cut from bolts only. ‡Included in other items.

Our mills started 1916 with depleted stocks and a car shortage, the latter trouble being increasingly felt throughout the year.

The car situation continued to be one of the greatest difficulties in the spring of 1917. Latest reports indicate some improvement in car supply, though unshipped orders on hand are still very heavy.

Each month of 1916 saw the re-opening of mills that had been closed down for various reasons and the building of new plants to handle the business offering. To the present time the demand from our largest market, the prairies, continues good, and with the high prices of pastoral products now obtaining the outlook for this market is most hopeful.

1916 witnessed a remarkable increase in consumption of B. C. lumber in eastern Canada, the quantity sold in the east in 1916 being almost double that of previous years—a most satisfactory showing in a competitive market such as this where native and imported woods are readily available.

Energetic educational work has been carried on by the B. C. Forest Branch in Eastern Canada for the past 18 months, resulting in a wider knowledge and appreciation of the excellencies of British Columbia woods and a better understanding by our mills of the requirements of the eastern market. This market should show substantial increases from year to year and be of great value to our industry. With the return of normal shipping conditions it is hoped to establish a cargo trade from British Columbia to eastern Canadian ports via the Panama Canal.

Very little off-shore business was possible during 1916 on account of the absence of tonnage. With the building of the fleet of auxiliary schooners this condition is being remedied to a certain extent. Three cargoes have already been dispatched this year in vessels built in British Columbia of B. C. Douglas fir and the balance of the fleet is expected to be in commission during the latter part of the summer. All these vessels have been chartered for lumber cargoes to various parts of the world.

With the wealth of forest products this province has to offer to the markets of the world, combined with its geographical location in relation to such markets as South America, Australia, South Africa, India and China, British Columbia should do a large export trade. Some of these markets will take the lower grades which are always produced when high grades are sawn. British Columbia has a large and important market in Canada, but wider markets absorbing all grades will give that stabilizing influence so necessary in the lumber industry to-day. A restricted market dependent on the success or otherwise of a grain crop in one particular part of the world is too uncertain a foundation for a business in so widely applied a staple product as lumber. Therefore, we hope to broaden our business and sell our products in a greater number of markets. We need variety in our markets to absorb all the product of the log. This will enable us to produce more economically with a greater benefit to the consumer.

As a result of a better log market in British Columbia the export of logs in 1916 amounted to but one-half the quantity exported in 1915.

The Pulp and Paper Industry

In pulp and paper production in British Columbia marked activity has been evident during the whole year. All plants in operation have run continuously, producing a total of 80,000 tons of paper and sulphite wood pulp. Three new companies have commenced operations this year, two of which are already producing, and the third will be doing so in the very near future. Our production of pulp and paper in 1917 will probably be double that of 1916.

In addition to pulp and paper developments on the coast large areas of pulp timber are available in the interior, development of which will undoubtedly be undertaken before long. Many enquiries regarding these are now being received from concerns who are beginning to realize that the last great reserves of pulp timber of the continent are in this province.

To sum up, the experiences of 1916 have shown that notwithstanding great difficulties such as shortage in labor and supplies and the confused railroad situation regarding cars, the Pacific Coast province of Canada is struggling successfully to overcome the handicap of war conditions.

Planing Mill Waste for Toys

That a market for virtually all of the waste of a planing mill is to be had for the seeking is evidenced in the occasional bringing to light of what is being done by some planing mill managers in various sections of the country. The latest has to do with a planing mill in the Northern States. In turning out some of its products waste blocks of various sizes were numerous and served to furnish all the fuel required for the plant. This material had a fuel value of $3 a ton.

One day a visitor looked the plant over, noted the waste blocks and began to figure out the number of them in a ton. He offered the manager $17 a ton for all the waste of that character turned out. A contract was made and the visitor informed the manager he was a toy manufacturer and that the blocks purchased would cost him less than half of what it cost him to make them. The mill manager immediately placed his thinking cap in order, secured samples of all the planing mill waste, called on other toy manufacturers and before returning home found a market for all the waste about the plant except the sawdust. The final result is that the sale of the waste purchases all the coal needed for the plant and leaves a profit averaging $300 a month to the company.

A little analysis of the waste products about the saw and planing mills would soon prove that much of the material going to the slab pit has an excellent commercial value.

There was keen competition for the lumber offered by auction at the sale of the assets of Damien Lalonde, Ltd., Montreal, in liquidation. All the lumber, totalling about a million feet, of various descriptions, was sold, and fetched just over 80c on the dollar. The valuation price was about $30,000. Mr. Lalonde has started in business again as a retailer.

An Interesting New B. C. Shingle Mill

Dominion Shingle and Cedar Company Plant at New Westminster—Special Construction and Equipment Problems Successfully Solved

By A. F. Menzies, mechanical engineer

Air-cooled burner.

The opening of the shingle mill of the Dominion Shingle & Cedar Company, New Westminster, B. C., marks a new arrival into the business, in Messrs. Marsh, Hutton, Powers, the well-known New Westminster contractors. The mill is located on the site formerly occupied by the Royal City Shingle mill which was destroyed by fire some years ago. The site is on the Fraser River, above the Lulu Island bridge, just where the North Arm branches from the main stream. A spur line from the British Columbia Electric Railway Company's line to Lulu Island provides the mill with trackage. One of the accompanying illustrations shows the mill as viewed from the bridge with the city of New Westminster in the background. The booming ground, well filled with cedar logs, is shown to the right.

The peculiar shape of the site and the fact that there was a perfectly good burner foundation which it was desired to use, necessitated a mill of rather unique design. The ground being all "made" with sawdust and slabs a substantial and well braced pile foundation was required.

The Main Building

The main building is 30 ft. x 72 ft. and has two floors. An extension about 10 ft. wide on one side forms the packing room on the lower floor and the filing room on the upper floor. The piles supporting the building are spaced 12 ft. centres and are capped with 12 in. x 12 in. timbers laid transversely. Several 10 in. x 12 in. streak sills, with 2 in. x 12 in. joists are interspersed from the beams for the 3-in. flooring.

The upper floor is carried on 10 in. x 12 in. sills supported by 10 in. x 10 in. posts, spaced 12 ft. centres. Above this floor the building is of lighter construction, the studding and roof framing being 2 in. x 8 in. The upper floor is lighted by a row of skylights directly over the machines and by windows in the wall away from them. There are several objections to windows near the shingle machines. The light from them is very much obstructed by the machines themselves and the windows are continually being broken. With skylights above the machines the light falls just where it is wanted and there is very little danger of them being broken. The principal objection to skylights has been their tendency to leak, this defect can be overcome, however, if they are properly constructed. The interior of the building has been whitewashed for the double purpose of diffusing the light and as a certain amount of protection from fire. Outside, the buildings are sheeted with galvanized, corrugated iron.

The log haulway is built up on piles spaced 10 ft. centres, the lower section being hinged to enable it to be lifted above the water for repairs. On account of the rise and fall of the tide (about 8 feet) it was necessary to carry the haulway a considerable distance into the river. The piles are capped with 12 in. x 12 in. timbers on which stringers are laid, the latter carrying the 8 in. x 8 in. ties on which the haulway is built. To overcome the tendency of a long log to tip when its butt is at the swing saw the upper end of the haulway, for about 31 feet was made level, care was also taken to get as easy a grade as possible.

The log chain is 1½ in. x 9 in. long link, it is fitted with a number of cast steel chairs provided with teeth, making it unnecessary to dog the logs. The chain is driven by a double geared log jack, belted to the main line shaft. The driving sprocket which is located well back and below the level of the swing saw is fitted with five reversible teeth. All the transmission machinery and the machines on the lower floor were supplied by the Puget Sound Machinery Depot, Seattle, Wash.

The swing cut-off saw is 84 inches in diameter and is carried in a well-braced timber frame which is hung independently of the upper shaft. When locating the swing bearings care was taken to see that the saw would cut through as large a log as possible and yet put the least load on the feed works and avoid the possibility of the brake slipping and the saw slamming into a log, which, it goes without saying, is detrimental to the saw. The feed is by friction wheels working a single rack and pinion, a brake being provided and arranged so that when the friction is off the brake is on.

It will be noted from one of the illustrations that the swing saw is on the opposite side of the mill from the other machines, this made a reverse drive necesary for it. The reverse was obtained by a goose neck belt, the upper pulley of which was located on the level of the upper floor above the recess provided for the feed works of the swing saw. The upper pulley is on an adjustable frame which provides means of relieving the tension on the belt when not in use. The drive from the upper shaft to the saw arbour is provided with a belt tightener arranged to increase the belt tension as the saw gets into the logs.

To drive the swing saw and the two following described saws, friction pulleys are used on the line shaft, arranged with lever control for convenient operation. A large Covel Manufacturing Company's automatic saw gummer is provided for upkeep of the 84 in. saws. The saws being handled from the arbour to the gummer by means of a light chain block running on an overhead rail.

To gauge the length of the shingle blocks a steam log stop is

Dominion Shingle & Cedar Co., Ltd., New Westminster—General view of plant.

Dominion Shingle & Cedar Co., Ltd., New Westminster—The log deck.

provided. It consists of a steam cylinder and piston located under the floor and well secured to the beams. The piston rod is connected to an adjustable stop block which works through a heavy cast steel guide bolted to the floor. The stop block is made so that it can be easily adjusted to give either 16 in. or 18 in. blocks. The log stop is handled by a lever located conveniently to the man operating the swing saw.

The discs cut from the logs are split into convenient sized shingle blocks on a steam feed bolter equipped with an inserted tooth saw, 60 inches in diameter. The saw and arbour are fixtures, while the table on which the timber is laid is fed in by the steam cylinder. To reduce the power required to feed the table it is carried on iron wheels running on rails, while to facilitate the handling of the timber the table and the floor between it and the adjacent machines are sheeted with steel plate. Some of the discs from the larger logs require to be split into four or six pieces before they are small enough to be handled.

The bark, knots and other visible defects are removed from the blocks by a knee bolter. This machine has been accused of being a timber waster; but in the hands, or rather, knees and hands of a good operator, very little need be wasted. By removing the bark, which often contains sand, etc., a considerable saving of shingle saws is effected. Also, if the timber has defective portions the sooner these portions are on the refuse conveyor the better.

The foregoing machines are all located on the lower floor. Care was taken in the location of them in relation to each other, so that the timber could be conveniently handled without crowding.

From the knee bolter the shingle blocks are thrown into an inclined conveyor. The foot of which is located so that the knee bolter operator simply gives the block an extra swing when making the last pass and it drops into the conveyor. At the head of the incline the blocks are dumped sidewise into a hopper along the bottom of which the distributing conveyor is run.

This conveyor runs the length of the mill on the upper floor and carries the blocks in a reverse direction to that in which they were travelling on the lower floor. The blocks are picked off the conveyor by hand and are either placed on the tables at the machines, or, if more blocks are coming up than are required, they are stowed on the side opposite the machines, ample space having been provided for this purpose. By having this storage space it is sometimes convenient to run one shift on the log deck and two shifts on the shingle machines. If it is desired, additional shingle machines can be installed and the log deck run double shift.

A New Shingle Machine Design

The five shingle machines installed are of a new design recently got out by Mr. H. Schaake, of the Schaake Manufacturing Company, New Westminster. This is the first mill in which these machines have been installed and on that account they are given a slightly extended description.

The machines are of the upright type having a cast-iron frame of "L" section. Special care has been taken in the design to resist the stresses set up by the reciprocating motion of the carriage. The carriage guides, both top and bottom, are of square steel, set corner up, the upper slipper being made adjustable to compensate for wear, while the guides themselves can be reversed when worn and so get a new lease of life. The carriage itself is cast in one piece with the corners well stiffened. All the usual adjustments of the arbour, to give the desired lead to the saw are provided. In place of the usual weights to hold the top jaw on the block, a spring operated holding device has been adopted. This is much quicker and holds the timber more firmly than the weights.

Dominion Shingle & Cedar Co., Ltd.—One of the new shingle machines.

The heart of any shingle machine, and perhaps the most noteworthy feature of the "Acme" machine, is the set works and spur roll clutches, which are the outcome of the expenditure of considerable time and money for experimental purposes by Mr. Schaake. In the older types of machines with toothed ratchets and fixed travel of the setworks the thickness of the shingle depended on a combination of the size of the spur rolls, number of teeth in the ratchets and the kerf of the saw. On the "Acme" machine the setworks are arranged with an adjustable travel and positive clutches on the spur rolls. This arrangement permits any thickness of shingle to be cut by adjusting the nuts "A" for regulation of the butt, while the tip thickness is adjusted by means of the set screws "B," shown in the illustration. These adjustments are entirely independent of each other.

A grainer attachment is also provided enabling the sawyer to cut a succession of butts from either end of the block, at will. A considerable saving of timber can be effected by judicious use of the grainer, as a slight defect, which, if it was in the butt of the shingle would cause its rejection, can be kept in the tip where it does no harm. The grainer is simple in operation, the rod "C" being moved by pressure from the sawyer's knee cuts off the setworks ratchet and consequently the cams are not turned.

Some sawyers like a machine which cuts two butts in succession from each end of the block. To provide this variation it has been usual to carry an extra set of cams. By an ingenious arrangement this is accomplished by altering the angle of travel of the set works lever by shifting the pin "D" into hole "E."

As the shingles are sawn they are picked up by the sawyer and the edges trimmed on the usual jointer saw, which, of course, forms part of the shingle machine. They are then thrown over the machine into a chute which carries them to the packing floor below. The shingles are packed into the familiar bundles in shingle packers, which were also supplied by the Schaake Manufacturing Company.

The bundles are placed on a long conveyor which takes them to the entrance of the dry kilns. This conveyor consists of two lines of ½-inch common round link chain let into wooden stringers, the chain projecting sufficiently to carry the bundles. The illustration of the burner shows this conveyor on the right. The chain is drawn by pocket wheels and an automatic tightening device is provided to compensate for wear.

The Power Plant

Steam is provided for the plant by a 72 in. x 18 ft. Jenckes Machine Company's boiler. The fuel is burnt in a "Dutch" oven furnace which is rather larger than usual, but its size is amply justified by the excellent steaming abilities of the boiler.

The main engine is a twin 12 in. x 16 in. Houston Stanwood & Gamble, running at 160 r.p.m. It has a band wheel 72 inches in diameter by 16 inches face, carrying the 15-inch driving belt to the main line shaft. The belt, and the others in the plant are of the Goodyear Extra Power brand. The line shaft, as previously mentioned, runs along the lower floor and is carried in post boxes secured to 10 in. x 12¼ in. machinery posts, which are in turn secured to streak sills below and cross beams above. One point worthy of notice here is the method of oiling the line shaft bearings. The bearing caps are cut away completely where the bottom of the oil box usually is. This makes a large opening right down to the shaft which is filled with grease, a light cover to keep the dust out is also provided. The grease only requires to be pressed down occasionally and, should a bearing heat, a good supply of lubricant is automatically available.

Refuse, the largest by-product of the lumber business, is removed by a long main conveyor running the length of the mill and below the lower floor. On account of the grade to the burner (the foundation of which was already made) it was found necessary to make this conveyor in two sections. Two other conveyors, one for spalt and the other for sawdust, run below the upper floor and take the refuse from the machines, from which it is discharged by chutes. These two conveyors are arranged to discharge either into the main conveyor or into the two conveyors running to the boiler house, by means of a "Flip Flop."

An Air-Cooled Burner

The burner is of the air-cooled type and was the first of its kind constructed in Canada. It was built by the Walsh Construction Company, of Vancouver. This type of burner being of light construction is easily built and should be economical to maintain. The foundation is of brick, into which a grate in the form of a cross is built. The burner and the main refuse conveyor are well shown in one of the illustrations. The superstructure is carried on 6-inch "I" beams fastened to and projecting from the foundation. The shell commences at the outer end of the projection which is sufficient to give an air space of about 14 inches all round. On account of the draft

a large quantity of air enters this space and on account of the shape of the burner this cool air hugs the sides and prevents the hot gasses from coming in contact with the thin shell. Of course, the radiant heat from the fire itself reaches the shell; but it does not seem to be sufficient to cause any trouble.

The main supporting frame consists of light angles running vertically, on to which are clamped a series of hoops of ¼-inch pipe. The sheet iron covering is No. 16 B. W. G. thick, and is fastened to the pipe hoops with clips. To prevent sparks getting out a spark arrester of wire mesh is provided at the top. It will be seen from the foregoing that this type of burner will make a much better proposition to the man who foots the bill than either a brick or a heavy plate burner.

There are two brick dry-kilns in which the shingles are dried before shipment. The kilns are each 20 ft. by 120 ft. and have three lines of rails on which the trucks run. To avoid having to push the trucks through the kilns they are built with a down grade towards the outlet end of approximately ¼ inch per foot of length. A kiln full of shingles is carrying rather a heavy load. That this load is often underestimated is proved by the number of kilns which have sagged. In this case the piles in the foundations are spaced 4 ft. by 5 ft. under the walls and 8 ft. by 5 ft. under the rails. The heating surface of the kilns is provided by a series of 1-inch pipes run nearly the full length and all connected to a feeder header at the upper end and a drainage header at the lower end. Steam is supplied at a reduced pressure through a Foster reducing valve. At the lower end the drainage is all returned to a feed water tank near the boiler by means of two Johns-Manville steam traps. To have permanent and reliable record of the temperatures in the kilns at all times two Bristol's temperature recorders with seven-day dials have been installed. Like the burner, the dry-kilns were constructed by the Walsh Construction Company, of Vancouver.

At each end of the kilns a large platform has been constructed for handling the bundles onto and off the trucks. Mathews gravity conveyors being provided to facilitate this work.

One result of the drying of the shingles is to slacken up the bundles considerably, to tighten them and also reduce the size to enable more bundles to be got into a car a steam shingle press is used.

The capacity of the mill necessarily varies, according to the quality of the timber. Each of the five machines is rated at from 30 to 45 thousand shingles per day of ten hours. The mill was designed and constructed under the supervision of Mr. F. L. Johnson, who is now in charge of its operation.

The Red Cedar Shingle Industry of B.C.

Its Success Based Upon Good Grades Well Maintained — Producing Costs Increased by the War

By R. D. Hyde

THE manufacture of red cedar shingles is one of the greatest industries in British Columbia. There are about 90 mills in the province, with an aggregate of 390 machines, actively engaged in this work, the magnitude of which may be reckoned by the fact that for each machine a plant investment of from $5,000 to $8,000 is necessary. There are produced annually in British Columbia more than two billions of red cedar shingles, about 60 per cent. of which are exported to the United States.

British Columbia shingles, solely on their merits, have made a market for themselves across the line. The Eastern States in particular demand, for the most part, shingles of better quality than are generally made in Washington, and are willing to pay the premium over Washington shingles, which is necessitated by the higher grade, and consequently higher producing costs of British Columbia shingles. It may be well to state here why superior shingles are manufactured in British Columbia to those that are commonly produced across the line. It is not because the timber is better on our side than on the American side, although for their low grades it is possible for the Washington mills to cut a smaller class of logs than the British Columbia mills can use. The superiority of the British Columbia shingles is due to the fact that the grading rules for both American stars and clears permit the inclusion of flat-grain shingles, while the British Columbia grading rules call for strictly edge-grain shingles. These cannot be made to advantage from small logs, because, being quarter-sawn to obtain the edge grain, the resulting shingles would be too narrow to be acceptable.

Good Grades Involve Higher Producing Costs

British Columbia manufacturers, in maintaining their grades, find their sawyers cannot cut anything like the number of shingles per day that is possible, and almost required of the sawyers in Washington. The sawyers in British Columbia average about 25,000 shingles per day, against 40,000 to 50,000 which is common across the line. In other words, shingle manufacturers in British Columbia find it necessary to sacrifice quantity in favor of quality. Approximately the same amount of day labor is necessary to handle both a small and a large cut, so that the manufacturing cost per thousand is much higher for the small than for the large cut. The shingles from British Columbia which are in greatest demand in the United States are known as B.C. XXXXX. They are 16 in. long and five butts placed together will measure 2 in. when green. These shingles have only the advantage of additional thickness over the XXX shingles commonly used in Canada, which require six shingles to measure 2 in. at the butts when green. The grades, aside from this, are identical, but the added thickness of the XXXXX shingles makes possible an increase of ten or twelve years in the life of a roof, and Canadian consumers, particularly those in Ontario, are beginning to realize the value of this point.

The war, as in practically every line of endeavor, has made itself strongly felt in the shingle industry. Caused by it, manufacturing costs have doubled and business has been greatly retarded. The labor situation in British Columbia, due to the war, is very serious. There are not as many available men as are required, so that the manufacturer can never be certain how many of his crew will be in his employ the next day. Labor fully realizes the advantage it has, and is constantly making demands for higher and still higher wages, before which the manufacturer is helpless. In the shingle industry wages for ordinary labor have increased over 100 per cent. during the past year.

Labor and Transportation Difficulties

The shortage of raw material—that is, logs and bolts—which, in turn, is largely due to the labor shortage, has probably been the most active force affecting the manufacture of shingles. In accordance with the law of supply and demand, the price of raw material, due to the shortage, has advanced nearly 100 per cent. in the past year. The present cost of logs and bolts is actually higher than was the selling price of finished red cedar shingles a little over a year ago. The late spring and heavy snows kept logging crews out of the woods much longer than is usual, and, owing to the fact that this is the big salmon year, a large percentage of bolt cutters have gone fishing, which they find is temporarily more profitable.

The car shortage, which has been experienced all through the year, has been reflected strongly in the shingle industry. Owing to the fact that the shingle business is more or less seasonable, it is impossible for manufacturers to avoid the acceptance of orders for future shipment. British Columbia mills had orders for nearly 2,000 cars of shingles booked ahead early this spring. The car shortage, with its attendant embargoes, made it impossible to move a large percentage of these orders when they should have moved, and at the same time manufacturing costs were increasing by leaps and bounds, so that when mills were finally able to make their shipments, the shingles were actually costing them more to produce than they were receiving for them. Again, owing to the labor shortage, mills were forced to operate or lose their crews, with no certainty as to when or where they would be able to get others. Consequently, shingle production was far in excess of shipments, which required the building of large storage sheds. This necessitated another direct loss, because, owing to British Columbia's damp climate, shingles stored for even a period of two weeks absorb a great deal of moisture, thereby adding to their weight and consequently the amount of freight charges. Many mills when they had cut to their storage capacities were forced to shut down, and, for reasons before mentioned, were also forced to keep their crews intact during the time they were not operating, which added greatly to their overhead costs.

Shingle prices following, and as a result of all these increased manufacturing costs, have advanced to a higher point than they ever before attained, and it is thought that they will go still higher before the year is over. Manufacturers fully realize that the high prices for shingles encourage the use of prepared roofings, but they also realize that until some means can be found to reduce manufacturing costs shingle prices cannot come down and still permit a margin of profit for their manufacture.

Modern Shingle Mill on the Fraser River

Brunette Sawmill Company, Limited, New Westminster, Operating Electrically Driven Mill with the Latest Type of Equipment

Gradually a very superior type of plant for the manufacture of shingles is taking the place of the hastily erected, ill designed and inadequately equipped mills which—despite these drawbacks—have been successful in making the quality of British Columbia red cedar shingles famous throughout the length and breadth of the American continent. Probably no better shingles are turned out in the new plants than in many of the antiquated ones, where the careful manufacturing methods of the past are still being enforced to the very letter, but the fact that within the past few years most waterfront mills have been compelled by the increasing scarcity and higher price of bolts to install costly machinery for the utilization of the entire log has in itself hastened the coming of the modern type wherein the higher cost is more than offset by the saving effected in labor, the increased output per machine, and greater uniformity of product.

Probably the most finished example of the modern type of shingle mill is the new electrically operated plant of the Brunette Saw Mill Company, Limited, at Sapperton, New Westminster, which replaces one destroyed by fire on August 24, 1916, after ten years' service. Work on the new mill was commenced November 6th, but owing to shortage of labor the working gang never exceeded twenty carpenters and millwrights, so that it was near the end of May, 1917, before the machines were started up.

The main building is 32 x 132 feet, two storeys in height, with steel roof, and stands on a high post foundation, it being the intention to use this space when necessary for storage purposes. From the standpoint of fire protection the building is in the preferred class, being of heavy timber frame construction, the joists and cross beams being surfaced to prevent the accumulation of fine cedar dust, which is almost an explosive and particularly dangerous in case of fire. The machine room in the second storey will accommodate seven machines, but at present only five are installed—three Sumner and two Letson and Burpee uprights—each driven by a 23 h.p. direct-connected motor.

One of the new devices to be seen only at this plant is connected with the operation of the log haul which delivers the timber to the sawing dock. Practically there is a twin log haul on one slip, the bull chain being in two sections. The first section from the water edge will handle four logs in tandem; the head log is delivered onto the top chain, which feeds it to the cut-off sawmill until only a six-foot section remains, when the next log is advanced and pushes the short section forward, and so on continuously. The equipment on the sawing floor comprises 84-inch cut-off (E. C. Atkins Co.), 58-inch chain splitter (new design), and 54-inch knee bolter, both being made in the well-equipped machine shop on the company's sawmill premises. The shingle machines are ranged along the right-hand or north side from the log-haul, the bolts passing along a conveyor to the sawyers. The latter work under health conditions enjoyed in few mills, each machine being connected up to a powerful blower system installed by John K. Miller Co., Ltd., Vancouver, which carries away every particle of dust thrown out by the swiftly-revolving saw. The shingle packers' bins are on the south side of the lower floor, a chain conveyor running along the north side. The finished bundles are delivered onto cars at the westerly end of the packing floor, which when loaded pass along the tracks leading to the kilns, where the shingles undergo a gradual drying process for seven or eight days before being transferred to the storage shed or the railway car on the siding alongside the latter. The ten-hour cut of the five machines averages 160,000 shingles day in and day out; with two more in operation the output will reach 220,000 shingles. The policy of the Managing Director, Mr. Lewis, is not to go after a record for production, but to make the quality of the article is the prime consideration, as it has been for years.

Ample Power Installation

The boiler house, 30 x 50 feet in size, two storeys, is constructed of 2 x 6 in. cribbing, and contains two 72 in. x 18 ft. boilers with Dutch oven fuel feed. The engine room adjoining (under the same roof) is 24 x 34 ft., two storeys. This contains one Robb-Armstrong 16-inch side crank tandem engine direct connected to Canadian Westinghouse 200 k.w. generator, complete with exciter, rheostat, switchboard, etc. The motor installation receiving current from the generator as follows: One 50 h.p. motor operating double log haul and cut-off saw; two 40 h.p. motors direct connected to knee bolter and splitter; five 20 h.p. motors and five 3 h.p. motors direct connected to shingle machines; one 20 h.p. motor driving the refuse burner conveyor; three 10 h.p. motors operating the block conveyor, boiler conveyor and blower fan; one 7½ h.p. motor driving the filing room equipment; one 1½ h.p. motor operating grinder on big cut-off saw.

Interesting Plant Notes

There are four dry kilns of standard type occupying a space of 52 x 96 feet. They are of cribbing construction, plastered inside, with tar and gravel roof, and were erected by the company.

The storage shed, 52 x 125 ft., is of sufficient capacity to handle the output of the kilns with room to spare. It is equipped with transfer tracks and Mathews Gravity Conveyor sections for car loading purposes.

The refuse burner, of the air-cooled type, is 32 ft. diameter by 54 ft. in height, and was erected by the Walsh Construction Co., Ltd., Vancouver.

In addition to being connected with the New Westminster water system the company has installed a fire pump with a capacity of 500 gallons per minute. Six-inch mains reach all parts of the plant, serving four outside hydrants and six inside, the buildings. Almost absolute protection from fire is further assured by the automatic sprinkler service installed in the shingle mill, boiler house, engine room and dry kilns by the General Fire Extinguisher Co., Ltd., Vancouver.

The interior of the several buildings received a coat of whitewash prior to starting up, the improvement effected to the lighting being very marked. The exteriors will be painted red, with white trimmings, which will give the plant a very smart appearance.

Construction work throughout was carried out under the joint supervision of J. T. Mackie, master mechanic with the Brunette Sawmill Co., Ltd., and C. P. Bussey, construction foreman for the company, who became superintendent of the mill when it was started up on June 1st.

The approximate cost of the new plant was in the neighborhood of $60,000.

B.C. Interior Trade Improving

Demand and Supply Approaching a Better Balance Permitting Production at Moderate Profit—The Labor Scarcity

By I. R. Poole, Sec. Mountain Lumber Manufacturers' Association

GENERAL conditions surrounding the lumber trade in the interior of British Columbia have gradually improved during the past two years, and although prices have advanced considerably since the spring of 1915 they have not advanced as rapidly as the increased cost of production would warrant. Compared with the selling price in 1915, lumber to-day is from 30 to 50 per cent. higher, but in making this comparison it must be remembered that during 1915 and for some years previous, lumber was sold below the cost of production; in some cases below the actual cost of the saw logs. The increase referred to therefore does not mean that the profit of the lumber manufacturer has been increased by the percentage shown. Compared with the more normal year of 1912, when the average price received by lumber manufacturers as a whole was below the cost of production, the current market price represents an increase of about 20 per cent. The increase in the cost of labor and supplies entering into the cost of producing lumber has, during the same period, been considerably greater than the advance in the price of lumber; labor representing an increase of 25 to 50 per cent., and mill supplies, such as machinery, machinery parts, belting, steel, wire rope, saws, etc., from 50 to 100 per cent. Hay, oats, meats, butter and other camp supplies have also increased from 25 to 100 per cent. Entering also into the increased cost of production is the scarcity and inefficiency of labor. Recruiting for forestry and other battalions for war purposes has drawn heavily upon the supply of experienced mill and woods men, and to-day the lumber manufacturers and loggers have to depend almost entirely upon foreign labor of various types for their labor supply.

The demand for lumber at present is fair, the volume of business having slackened during the past months or so, and prices are nearing a point where lumber manufacturers can hope to make some re-

turn on their investment. The improvement in the price is the result of the equalization of supply and demand, a condition which it will be necessary to maintain if the lumber industry is to be placed on a stable basis. The changed conditions with regard to the market have been brought about by reduction in supply, caused by the fact that continued selling of their product below the cost of production forced a large number of British Columbia mills to cease operations, and stocks were thrown on the market and disposed of at any price that could be obtained. In this way surplus stocks throughout the province have been gradually worked off during the past two years, the brisk demand of the fall of 1915 having hastened the cleaning up of practically all old stocks. The demand for lumber continued to be fairly good and a number of mills which had been idle for several years commenced operations again. There are, however, a considerable number of plans which, for financial reasons, have not resumed operations, and this fact, together with the fact that stocks had been greatly reduced, resulted in a great reduction in the supply which had the effect of strengthening the market.

At no time during past years have British Columbia mills worked to full capacity. Even in the years 1911 to 1913, when production was at its height, few of the mills were obliged to operate more than one shift. The demand at the present time is chiefly for material required in the rural districts of the prairie provinces, there being little demand for city building, which latter class of trade represented the greatest portion of the 1911-13 demand, so that, so far as the interior mills are concerned, we cannot look forward to a demand in the immediate future equal to that of the period last referred to. The improvement in the demand for B. C. lumber products from eastern Canada and increased activity in the export trade, etc., will absorb a considerable amount of B. C. lumber, but the present producing capacity of B. C. mills is more than sufficient to care for all demands that may be anticipated for some time to come.

Indications at present are that there will be an increase in lumber production throughout the province as compared with last year. This, however, will be regulated almost entirely by the labor situation, and also by the supply of cars and the orders available. Operations at present are seriously hampered through lack of sufficient labor, and there is no indication of any improvement. Shortage of cars has also hampered operations and will no doubt continue to do so, particularly during the months when the grain crop is moving. Interior mills depend entirely on the prairie provinces for a market, hence the crop situation is of vital importance. The outlook at present for a good harvest is promising, and mills look forward to a good demand during the balance of the year. Old orders are being gradually cleaned up and stocks are increasing. Interior mills, as a whole, will be in a position to handle all normal requirements.

In considering the present situation and the outlook, it should be borne in mind that the capacity of B. C. mills in normal times is greater than the normal demand of our present markets. This condition results in surplus stocks and an unstable market. The present abnormal prices, while not unduly high from the standpoint of reasonable returns to the producer, are an incentive to even greater than normal production. Hence wider markets in order to absorb the surplus of B. C. lumber must be secured to equalize supply and demand, if the lumber industry is to be placed and maintained on a permanent and stable basis.

Proper Cost Accounting Ensures Success

Production of Mill Work Requires Accurate Knowledge of Cost of Materials and Operations—Co-operative Methods Make Safe Results Possible

IF you ask any successful manufacturer of millwork, or sash and doors, what is the most important portion of his business, he will, in the majority of cases, tell you that it is the work of cost accounting. You might be inclined to think that getting orders was more important than finding out how much to charge for the goods, but it is not so, and many a man has found this out to his sorrow when it was too late. To-day, although nearly every manufacturer will admit the truth of this, it is surprising how many will balk at the proposition to install a modern cost accounting system. Those who have been getting along in the old, haphazard manner—imagining that they know quite enough to charge a good price for their products—are hard to convince that they would be better off if they devoted more of their time and money to bringing their cost system up to date. These same manufacturers are a millstone around the necks of those who have seen the light and who are charging real prices for their products. They make it possible for the bargain hunter to infest the millwork business, just as he infests other lines of trade. They take the profit out of a great deal of the lumber and millwork business, and are to blame for many of the failures that occur.

Probably we never will see the day when there are none of these men in any line of business, but it is to be hoped that in the production of millwork a better time is not far ahead, when there will be a considerable number of firms in each locality who have found out how to estimate the costs of their finished product, who have the backbone to insist upon getting the price, and who supplement this by turning down all the trade which cannot be obtained without cutting the price below the deadline. To-day the vast quantity of business that is done at this low level is responsible for frequent business disasters. This class of trade takes all the pleasure out of business; it keeps down wages as well as profits, and it increases a line of building activity that is risky to all parties concerned, from the lumberman to the purchaser of the finished building, with the possible exception of the contractor himself, who generally knows how to clear out of the danger zone and leave his business victims in the lurch.

Cost Accounting a Business Proposition

Now, all that has been said above is so well known to most men in the business that it would scarcely be worth while putting it into print or even discussing, if it were not that so many men who admit it are themselves guilty, not being willing to consider the installation of a modern cost accounting system in their own business. The objections raised are generally of one or two varieties. Ignorance makes cowards of some of them, and they falter before the imaginary difficulties of making the change, or they have an idea that the cost of making the change is too great. In other words, they think that they might as well go ahead losing money on much of their trade rather than make an investment in order to avoid such loss altogether in the future. In this way it comes down to a matter of balancing the cost against the present loss and of showing a man that, after an effective system has been installed, his business worries will be so greatly reduced that the trouble and expense involved in making the change are not worth considering.

Not long ago a millwork manufacturer in the United States who was carrying on a large business convinced himself that there ought to be some way of getting at his cost accurately enough to enable him to deal intelligently with customers who expected to get his goods so cheaply that there would be nothing in it for him. He knew that in the past many a customer had been getting the best of him, but he was at a loss how to go about cutting off this line of business. A study of the cost accounting situation, however, finally showed him that the key to the situation was to be found therein. How to get at the cost of any given article in any given quantity was the real problem. With this information he saw that he would be able to separate easily the sheep from the goats among his customers. Moreover, he saw that he would be able not only to revolutionize his own profit showing, but to help his competitors to do the same thing. Once he brought the consideration of his competitors into the problem he found that he was proceeding along a road that led definitely to results. He saw that the best way to solve such an important problem was to talk it over with other men in the same business. This he did, and he learned that others had been in the field ahead of him. A few years previously a number of millwork manufacturers had talked the matter over together and had formed a bureau for the interchange of information regarding costs, and this bureau, a pioneer in its work, is to-day distributing its benefits over a wide field. The bureau has developed a cost accounting system which is practical and easy to understand, and which is based upon the combined experience of those who become members. It is known as the Millwork Cost Information Bureau, of Chicago, but it has members in many parts of the United States and also in Canada, all of whom are continually making fresh tests and contributing information upon which the system is based and kept up-to-date.

A Practical Co-operative Plan

The manufacturer referred to above took his troubles to this bureau. At first he felt somewhat skeptical, not believing that he could ever get, as a selling price even, the cost prices contained in their schedule, the majority of which seemed to him to be much too high. The expense of installing the system, however, was not great, and he tried it out. To-day he is a convert to modern cost accounting methods, and there are many others in the same class. We are not seeking

to advertise this bureau in any way. We simply realize that they have developed a good system which is based upon a logical business principle, and that such a system, or any other one, similarly conceived and carried out, would be a good thing for any millwork plant to install. It enables them to cut out all the unprofitable business and to price their open orders in a manner that is fair to themselves and to the trade in general. The very first effect of making the change and trying it out is to give the manufacturer confidence enough to ask a fair price and to give it. He finds out immediately that in many cases competition upon a "big bill" is not so keen as he had expected, and that on other bills, no matter how low he may figure, he cannot get the business. Armed with the information obtained in this way by co-operation, a manufacturer will not hesitate to ask a profit on his entire output and to pass up all business that would show a loss. Writing about the matter, a certain mill man says: "We are convinced that cost knowledge is necessary if we are to get a profit on our entire product. If the lumberman was in a position to know his costs there would be a much smaller proportion of his output sold below the deadline, and the millwork business would show a return more in keeping with the time, energy, and money invested." It stands to reason that only something that is nearly perfect in the way of cost accounting would invoke such a statement from the keen business man.

Scientific Accuracy Possible

The object of this article is simply to impress readers with the fact that there is hope for everyone in the millwork business who is weighed down by the dead weight of not knowing how much to charge for his product. Most of the trouble in connection with the lumber business, from the woods to the retail yard, is caused by not knowing how to ask and to insist upon a profit, and the best way to get over the difficulty is to co-operate with other men in the same line of business. Retailers have been showing the way in this direction of late. Their object was not so much to get better prices as to associate with one another in promoting their mutual intesests of various kinds. Association taught them that competition is not the life of trade, but rather that co-operation is the real motive force that makes trade both active and profitable.

There are not many institutions devoted to the systematizing of millwork cost accounting, and therefore in putting this matter forward we are obliged to use one institution as a chief example. What they have done, however, can be done elsewhere, and we believe that the principles of their system are so sound that they can be applied to the industries in Canada with equally good results. There are many large millwork producing firms in Canada and the United States which have worked out their cost accounting methods so scientifically and successfully that they are in a class by themselves. Even they, however, can benefit by a consideration of this question. The great majority of other firms in Canada who have not given this matter the study it requires ought to take the subject up seriously and seek to co-operate, with the object in view of developing a systematic cost accounting standard.

One Canadian firm which has worked out this cost accounting in accordance with the methods of the Millwork Cost Information Bureau—the Georgian Bay Shook Mills, Ltd., in a letter to the Canada Lumberman, say: "We believe the day has come when woodworkers will no longer be satisfied to quote blindly, without any knowledge of the cost of what they are producing. Where the margins have always been small, as in our lines, and where the cost of raw materials and labor have advanced to such an extent, it is nothing short of business suicide for any firm to endeavor to fix a price on an article without knowing in detail the cost of producing such article. There never was a time like the present for every firm to establish a scientific and accurate method for finding its costs. It makes better competitors of us all and teaches us to know our business." They add, by way of explaining their adoption of this particular system, that the ideas involved in it are "those of practical planing mill men who have made a long study of scientific cost methods and cost accounting, and in this way have a great advantage over other cost systems that may be installed, where a knowledge of the detail of the woodworking business is lacking."

Ignorance of Costs Invites Disaster

The Canada Lumberman would not be inclined to put this matter so forcibly before its readers were it not for the fact that of late years, at meetings of lumbermen and in private discussions with members of the trade, this one fact has been borne home to us more definitely and impressively than anything else, namely, that in the millwork business and in the retail lumber business nearly all the disasters reported are the result of ignorance about costs. This ignorance is admitted by many firms and individuals who confess their inability to handle the problem. They imagine that they are in the hands of a business system—if it can be called a system—which they have inherited and from which they have no power to escape. So long as they feel this way they will have to continue in the old method of doing business, competing bitterly for trade which is not worth obtaining and cutting one another's prices on business which one of them might just as well have had at a fair profit. There is nothing quite so foolish as to spend one's life in a vain effort to make a living by such practice when, by making use of the experience and opinions of others, who are willing to reciprocate, it is possible to free oneself from these inherent evils.

There is nothing more impressive about business conditions in general to-day than the fact that the appreciation of these ideas is responsible for much of the success that has been achieved in almost every line of trade. Knowing one's costs and getting them, together with a profit, in the price asked, is the basis, and the only basis, of successful trade. Even the departmental store and the mail order business, which at first glance seem to be cut-price sinners of the blackest dye, base their operations upon the fact that they know the cost of everything they sell, not simply the cost to them, but the cost when the goods arrive at the customer's front door, and that they average their profits and losses on an enormous turnover so skillfully that the balance swings heavily to the profit side. They are pastmasters in the art of cost figuring, and thus are able to present to the public bargains and expensive goods so well mixed that they are certain to get a profit year in and year out.

Why should not the millwork business be based upon a similar knowledge of cost details? It has been proved that this is possible, and the sooner the day arrives when the majority of millwork manufacturers are doing business in this way the better it will be, not only for themselves, but, in fact, also for the consumer.

Montreal Retailers Interested in Association

On July 19 an informal meeting of several prominent Montreal retail lumbermen was held at the Board of Trade, to consider a suggestion for the forming of a retail association. A communication from the secretary of the Toronto Lumbermen's Credit Bureau, Incorporated, was read, describing the methods and aims of that institution. The discussion generally was along the lines of the need for educating retailers as to co-operation. Montreal, it was pointed out, greatly needed an association, the retailers being practically the only unorganized industry in the city. Such an association would benefit the entire industry, and would undoubtedly tend in the direction of preventing unfair competition, which injured retailers. The present time, it was also stated, was particularly opportune for organizing an association, having regard to questions which would inevitably have to be faced when the war was over. Now was the time to prepare for such events. Even to-day there were several makers which could with advantage be dealt with, especially as to quotations, credit, etc. It was decided to hold another meeting in the near future.

The holding of the above meeting was the result of some of the prominent retailers in Montreal taking an interest in the movement in Ontario and canvassing their fellow retailers. On the whole, the opinions expressed favored a general discussion of the subject. Some objectors were met with who thought that little or nothing could be accomplished through the medium of associations, and that we were all depending too much upon them to do work which could be more adequately done by individuals.

Men with such ideas are fortunately in the minority. They do not grasp the underlying spirit of co-operation. Most people recognize that combined effort is the most potent influence in trade, politics, religion, etc., and that it is only when pressure is exerted through the medium of men acting in unison that the maximum benefits are obtained. The real trouble in the past has been too much individual effort in the retail lumber trade—that each man has gone his own way, regardless of what his fellow retailers were doing, and that distrust and jealousy have been the outcome, to say nothing of the monetary losses, due to the want of co-operative effort in the way of checking undue credit.

Retail lumbermen have their own troubles and difficulties, they are interested in questions affecting the well-being of the industry, and unless there is concerted action—or at any rate a method by which the interests can be protected—the general interests are likely to be prejudiciously affected. If the retailers will not look after their own problems, they will inevitably be the losers.

Many Montreal retailers take the view that the formation of an association is at least worthy of consideration. They recognize the value of the "get together" idea, and it is likely that something definite will be done.

Montreal has peculiar conditions to meet in forming a retail association. Leaving out of consideration the bilingual question, a rock on which some associations have split—there is a certain amount of feeling over the failure of a previous retail lumber association, due to causes which need not be discussed. These are obstacles that can be overcome, provided there is a spirit of give and take. Practically all retail lumbermen spoken to on the subject admit the advantages of such an association—they are too obvious to be ignored. It has been pointed out that, to obtain the utmost benefits from this

co-operative effort, it is necessary that there be mutual trust, as without such a condition the formation of an association will be in vain. Members of a retail association are often competitors for the business that is going, and while it is impossible for them to combine for price regulation, there are many subjects on which they can get together to better conditions which have no direct connection with prices. These conditions have already been outlined in the Canada Lumberman, and the fact that similar associations in Canada and the United States are working satisfactorily is sufficient proof that, operated on the right lines and in the right spirit, there is a distinct field for them.

Without organization, the retail lumber trade cannot expect successfully to fight for its protection. In Montreal, the wholesalers are able, through the Board of Trade, to look after such questions as demurrage and freights, and a retailers' association could, in some instances, work in harmony with the wholesalers, thus adding to the effectiveness of any action.

Pulpwood Production and Consumption

Steady Growth of Pulp and Paper Industry in Canada Continued During 1916—Statistics of Exports of Wood and Pulp

The report of the Forestry Branch of the Department of the Interior upon pulpwood production and consumption in Canada, will be published in the near future. It will contain an interesting review of the industry, including the following figures and comments:—

The steady growth of the pulp and paper industry in Canada, practically since its inception was continued in 1916. Forty-nine firms reported their mills as active in 1916 as compared with 50 firms in 1915, but the total consumption of pulpwood and total value of the wood used rose much above the preceding year. These facts are brought out in the figures below.

Year	Total Consumption	Total Value
1908	482,777 Cords	$ 2,931,653
1909	622,129 "	3,464,080
1910	598,487 "	3,585,154
1911	672,288 "	4,338,024
1912	866,042 "	5,215,582
1913	1,109,034 "	7,243,368
1914	1,224,376 "	8,089,868
1915	1,405,836 "	9,426,217
1916	1,764,912 "	13,104,458

Of the five provinces engaged in this industry three greatly increased their production and two fell behind last year. Those which increased in production were Quebec, Ontario, and British Columbia, and those which showed decreases were New Brunswick and Nova Scotia. This change brings British Columbia back into third place which it occupied in 1914.

Pulpwood 1915 and 1916 by Provinces

Provinces	Quantity 1915 Cords	Quantity 1916 Cords	Total value 1916	Average value per cord 1915	Average value per cord 1916
Total, All Provinces	**1,405,836**	**1,764,912**	**$13,104,458**	**$6.71**	**$7.42**
Quebec	697,962	924,272	6,840,489	6.06	7.40
Ontario	480,627	637,612	5,016,425	7.92	7.87
British Columbia	90,535	108,997	579,799	6.08	5.32
New Brunswick	115,842	79,594	591,705	6.32	7.43
Nova Scotia	20,870	14,437	76,040	4.75	5.27

The Canadian pulp mills in 1916 consumed for the manufacture of pulp in Canada 1,764,912 cords valued at $13,104,458; while 1,068,207 cords valued at $6,866,669 were exported, making a total production of 1,068,207 cords valued at $19,971,127. This represents an increase of 25.5 per cent. in pulpwood production and 28.1 per cent. in total value as compared with 1915.

This great increase is due to the tremendous demand for pulp and paper caused by the war conditions of the preceding two years.

The average value of pulpwood at the mill increased 71 cents per cord over that of 1915. All the provinces show increases in the value of pulpwood except Ontario and British Columbia.

Production by Kinds of Wood

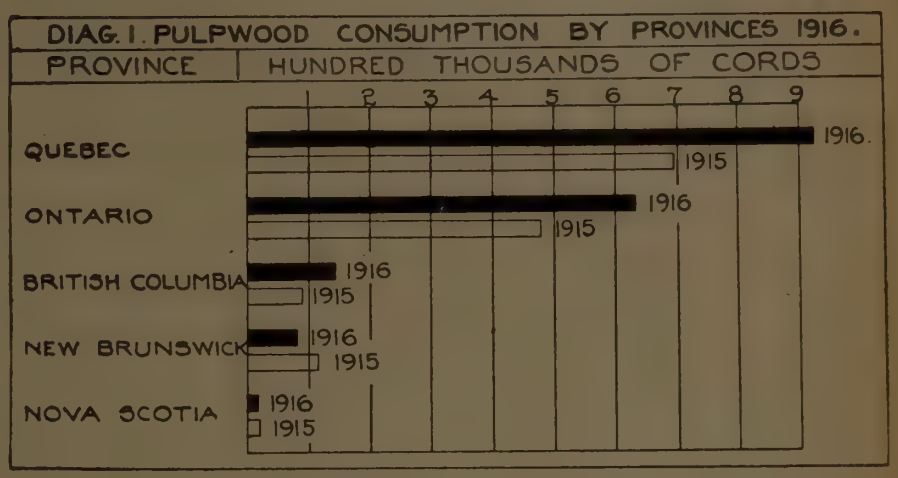
The production by kinds of wood in 1916 and 1915 was as follows:

Kinds of wood	Quantity 1915 Cords	Quantity 1916 Cords	Total value 1916	Average value per cord 1915	Average value per cord 1916
Total	**1,405,836**	**1,764,912**	**$13,104,458**	**$6.71**	**$7.42**
Spruce	998,156	1,203,557	9,219,414	7.07	7.66
Balsam Fir	307,219	433,154	3,167,311	5.84	7.31
Hemlock	55,265	82,307	483,633	5.89	5.88
Jack Pine	41,953	39,717	192,405	5.37	4.84
Poplar	3,243	6,177	41,695	6.94	6.75

The consumption of pulpwood by provinces in 1916 and 1915 is shown in the following diagram:—

Increase in Chemical Process Production

In regard to the process by which the wood is converted into pulp it is to be noted that while the mechanical, or ground-wood, process was the single process most largely used, the three chemical processes, for the first time in Canada, together consumed more wood than the mechanical, the totals being: chemical processes 937,654 cords



and mechanical process 827,258 cords. While a slight increase was made by the soda process and a considerable increase by the sulphite process, the notable change during the year was the increase made by the sulphite process from 470,949 cords in 1915 to 727,945 cords in 1916. An increased quantity of wood was converted into pulp by each of the four processes.

Approximately 1,296,084 tons of air-dry pulp were made in Canada in 1916. This is on the basis that one cord of wood produces one ton of ground-wood pulp or one-half ton of chemical fibre. This is a total increase of 20.6 per cent. over 1915. The increases shown by the different processes were: ground-wood pulp, 11,2 per cent.; sulphite process, 54.6 per cent.; sulphate process, 9.3 per cent.; and soda process, 23.1 per cent.

Spruce and balsam fir are used in all provinces and in all processes. Hemlock and poplar are not reported from New Brunswick and Nova Scotia. Jack pine was used only in Ontario and Quebec and most of it was used in the sulphate process.

Canadian Wood Pulp Production Gaining

The quantity of pulpwood manufactured into pulp in Canada has been steadily gaining on the amount of wood exported to other countries in the unmanufactured state. In 1908, 482,777 cords were manufactured into pulp in Canada, and 794,896 cords were exported in the raw state. In 1912 the figures were: manufactured in Canada, 866,042; exported in the raw state, 980,868. The dividing line was crossed in the year 1913, since which time the quantity manufactured in Canada has exceeded that exported. In 1915, 1,405,836 cords were manufactured in Canada and 949,714 were exported in the raw state. In 1916 these figures had risen to: manufactured in Canada, 1,764,912 cords; exported in the raw state 1,068,207 cords, showing that 696,705 cords more were manufactured into pulp in Canada than were exported in the raw state to be manufactured abroad.

The exports of wood-pulp from Canada show alternate increases and decreases practically every year from 1909 to 1916. The total export in 1915 decreased 14.3 per cent. while in 1916 it showed the remarkable increase of 53.4 per cent.

The alternate rise and fall of wood-pulp exports is shown in the following figures:

Wood-Pulp Exported—1908-1916

Year	Tons	Value
1908	233,505	$ 4,070,928
1909	280,744	4,898,842
1910	328,977	5,694,896
1911	259,514	4,902,862
1912	348,100	5,952,361
1913	298,169	5,913,560
1914	424,883	8,865,436
1915	364,170	9,279,414
1916	558,890	17,344,342

Trucks, Tractors and Trailers for the Lumber Trade

Motor Haulage Revolutionizing Delivery Problem

MOTOR trucks have come into such general use in retail lumber yards that they are to-day recognized as an ideal method of hauling, in the majority of cases. When first introduced this method of delivery had limitations which have since been overcome, so that to-day, with the motor and the various types of trailers, together with special loading devices for getting the load on and off the truck with the least possible delay, this method of delivery has become of great service to the trade. The motor truck is a wonderful efficiency stimulator. The economies which it introduces in connection with hauling costs arouse its owner to seek ways and means of getting the maximum amount of service from it. This fact, and the fact that a motor truck is able to do a great amount of hauling in a short space of time have led to the use of trailers and moveable platforms which make it possible to keep the trucks or tractors on the go all the time. With the greater carrying capacity and speedier delivery rendered possible by the use of trucks, the market of any retail lumber dealer is greatly enlarged. The accompanying diagram, kindly furnished by the Chicago Pneumatic Tool Company, is a striking illustration of how this works out, making it possible for the dealer to obtain trade in a vastly wider area of country than when his deliveries are made by horse and wagon.

One of the largest firms of retail lumber dealers in Toronto, who use three motor trucks in their delivery service and are greatly pleased with the results secured, state that an important feature in connection with such trucks is that the seat for the driver should be placed over the engine, which permits them to load longer material than on an ordinary truck where the driver's seat is several feet behind the engine. One of this firm's trucks is 2-ton capacity and is used for delivering the lighter loads, also for sash, doors, etc. This truck has travelled in the neighborhood of sixty thousand miles and has caused very little trouble. During five and a quarter years' use, the total repairs upon it, exclusive of tires, have cost $509.32.

The other two trucks used by this firm are of 5-ton capacity and the bodies are constructed so as to dump the loads, in the same manner as the ordinary roller wagon. One of these trucks has a body longer than the other, so as to facilitate the delivery of longer timbers and joisting without a trailer. When this firm has particularly long timbers to deliver, it makes use of a 2-wheel trailer with wheels 60 in. x 6 in., and strongly built, so as to be quite good for any load from five to ten tons. This trailer is also built so that the load may be rolled off in the same manner as with the two trucks referred to above. The repairs on these two trucks for a period of about four and a half years, exclusive of tires, have cost $1,361.87.

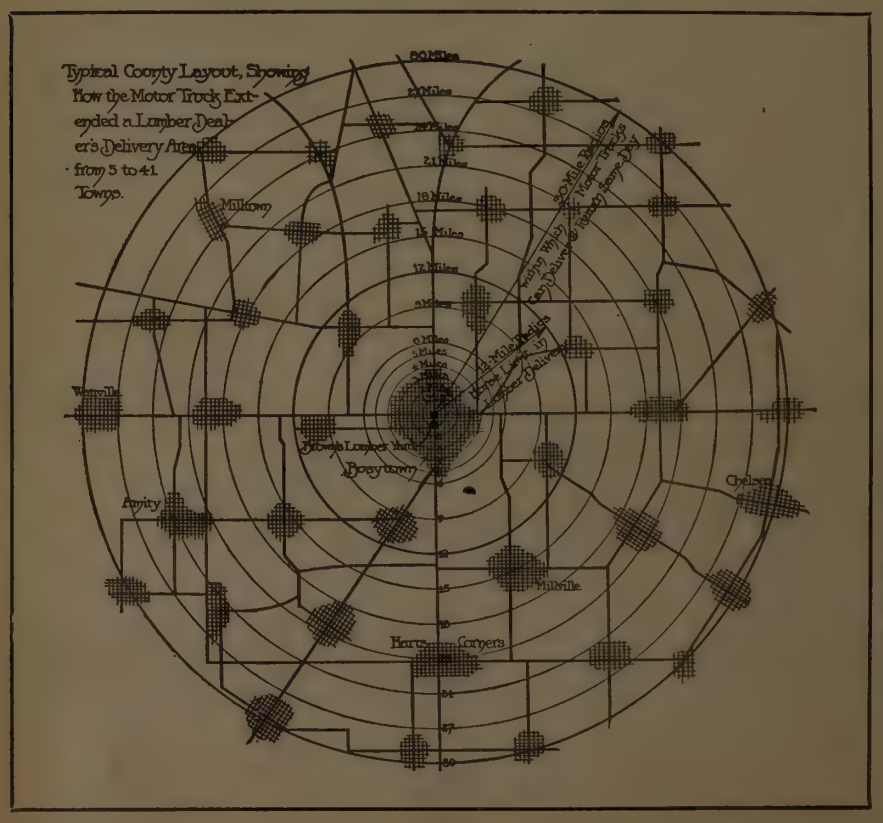
Referring to the operation of these trucks, the firm say that "so long as the roads are good and hard they are most satisfactory, but trucks are simply useless when there is not a good bottom to the road, and truck users should not attempt to use heavy loads unless there is a really good road to the point of delivery. Otherwise the truck may be injured more in getting into a hole and attempting to get out of it, than it would be in several months of ordinary use."

Since beginning to use trucks, the firm state that the wages of drivers have advanced about 50 per cent., chiefly on account of the war. The cost of tires, they find, is the big expense, and since using these three trucks they have paid $3,835.87 for their tires.

An old lumber wagon equipped with four steel rollers and used as a portable loader.

The point to which they refer emphatically is the importance of having a truck with the best quality and type of springs. Comparing their trucks with those of another firm which also operates three trucks, they state that they found the others were paying out considerably more money for springs. As yet, this firm has not had to renew one leaf of any spring on its trucks. Proper attention to the carburetor, they also state is of great importance. When the carburetor is working properly they obtain between four and five miles to the gallon of gasoline on a 5-ton truck, and between seven and nine miles to the gallon on a 2-ton truck.

A typical instance of the work done by motor trucks in delivering lumber is afforded by the case of the "Little Giant" motor truck, manufactured by the Chicago Pneumatic Tool Company, Chicago, and the Canadian Pneumatic Tool Company, Limited, 379 Craig Street West, Montreal, who have offices also at 107 Church Street, Toronto, and at Hamilton and Vancouver. This firm is mentioned in particular because its trucks are widely used and afford a good example of the general principles of motor truck haulage for lumber yards. One of the accompanying illustration shows a rear view of a motor truck equipped with five steel rollers, which make it possible to load and unload rapidly. Another illustration represents an old lumber wagon which has been equipped with four steel rollers so that it can be used as a portable loader. This wagon is drawn about the yard to receive its load and when the truck returns empty from making a delivery, the load is quickly rolled upon it and it starts upon a new delivery



Rear view of motor truck equipped with five steel rollers—Illustration furnished by Chicago Pneumatic Tool Company.

trip. Other methods have been adopted by different companies for putting a load upon a truck or trailer without delay, and for unloading quickly at the point of delivery. While these vary considerably in detail, the principle is much the same in regard to all of them, being governed entirely by the desire to save time and get the utmost possible amount of service out of the truck or tractor.

Huge U. S. Government Order for Motor Trucks

The letting of the largest motor truck order ever given by the United States army, totalling $33,179,026, which was announced recently, is of great interest to the lumber trade on account of the tremendous volume of lumber that will be required to manufacture the trucks. In anticipation of the business, inquiries have been out for several days, indicating that at least 25,000,000 feet of lumber will be required in making the bodies of the trucks. In addition a large volume of hardwoods will be purchased for the manufacture of wheels. These inquiries were placed in circulation by many of the eighty-one manufacturers who bid for the business, knowing beforehand what the government requirements would be. Orders went to six of the concerns that bid for the government business. The awards were as follows:

Four Wheel Drive Company, 3,750 three-ton chassis at $3,248 each, to be delivered at the rate of 175 a month.

Packard Motor Car Company, 1,500 three-ton chassis at $3,197 each, delivery 500 a month, starting in October; 300 three-ton chassis at $2,804 each, delivery 100 in August and 200 in September.

Locomobile Company (Riker truck), 400 three-ton chassis at $4,225 each, delivery 125 a month, beginning in October.

Nash Motors Company (Jeffery truck), 3,000 one and one-half ton chassis at $2,805 each, delivery by July 1, 1918.

Garford Motor Truck Co., 900 one and one-half ton chassis at $2,730 each, all delivered by the end of December.

Pierce-Arrow Motor Car Company, 800 one and one-half ton chassis at $3,500 each.

Through the terms of the contract 10,650 machines will be delivered before July 1, 1918, but the bulk of the huge order will be delivered before December 1, this year, if the manufacturers are able to make good their promise to the War Department.

Increasing the Efficiency of Motor Truck Delivery

The greatest economy that the motor truck has effected in the lumber field is in the improved methods of loading and unloading that its use affords. The day of holding up hauling units while each piece of lumber is individually loaded and unloaded has largely passed for many dealers, and in its stead methods have been adopted which permit the taking on and off of a whole load at one operation.

Many companies are now using trailers in conjunction with their motor trucks, in order that the trucks may be constantly on the move. Two or more trailers are operated with each truck, which permits the loading and unloading of the trailer while the truck is busy on another trip. The four-wheel type and the two-wheeler of the semi-trailer type are both used, with the latter predominating.

But the most general saving that has been realized with the motor truck is by use of the roller platform body, and roller loaders. A great many of the largest dealers in Canada and the United States are now using this equipment with very successful results.

The W. F. Hurd Lumber Company, of Detroit, Michigan, have their mills and yards equipped with trestles just the height of the platforms of their trucks. The trestles have channel tracks on which stake-aided platforms are moved about gathering up the load. The completed load is rolled to the edge of the trestle, one of their motor trucks is backed up to it, and platform and load complete are rolled on to the truck.

Melvin Savage, hauling contractor for the Christenson Lumber Company, of San Francisco, California, has speeded up delivery by equipping all the old lumber wagons of the Christenson Company, which were discarded when the present fleet of Packard trucks were installed, with rollers. These are moved about the yards gathering loads, and a full load is rolled on to the truck by the driver alone in three minutes, by means of a hand winch on the wagon rollers. The platform of the truck is also equipped with rollers. When the destination of the lumber is reached, the whole load is rolled off as easily as a single stick by means of a hand winch on the truck. Unloading in this way takes only three minutes.

A type of body from which the load is rolled by gravity is used on the Packard truck owned by the P. S. Huckins Lumber Company, of Boston, Massachusetts. This is a roller type body with the front roller mounted considerably above the rear one, and as soon as the load is unfastened it rolls from the truck by its own weight. Green and Wood, of New Bedford, Massachusetts, operate a similarly equipped Packard truck and also a trailer with the body designed and fitted in this manner.

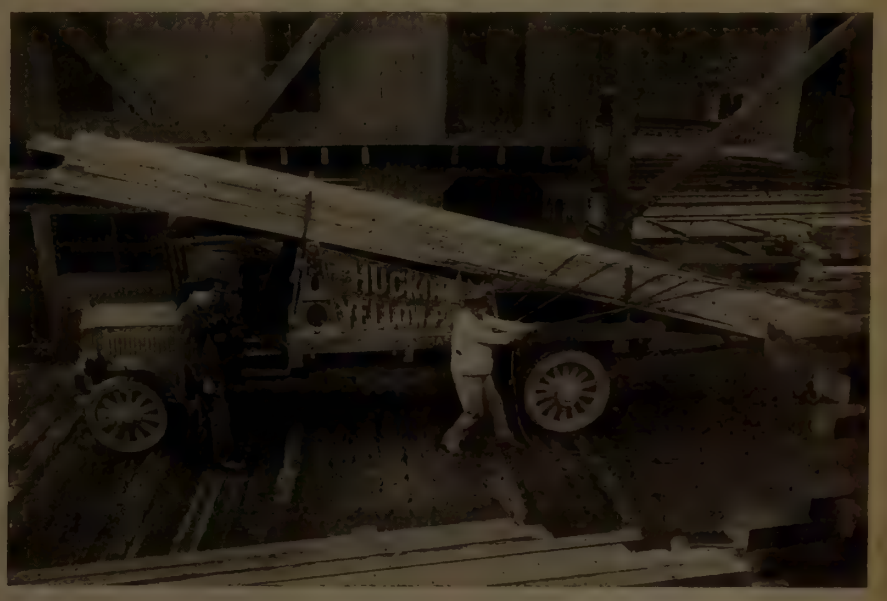
Without taking any of these special loading and unloading methods into consideration, a comparison of the cost of hose and motor truck delivery in the lumber field shows that the motor truck is by far the more economical transportation unit. Before standardizing on Packard trucks, the Mills-Carleton Lumber Company, of Cleveland, Ohio, made a careful comparison of the performance of a Packard four-tonner and a team of horses for a single day. The team of horses travelled nine miles and delivered 6,425 thousand board feet of lumber, while the truck traveled 36 miles and delivered 15,132 thousand board feet. Compiling this in thousand-board-feet-miles, it was found that the horses had accomplished 28,868 thousand-board-feet-miles, while the truck had reached 137,240 thousand-board-feet-miles. The truck did four and three-quarters times as much work as the team of horses.

Speeding Up Lumber Deliveries

Keeping material moving is one of the largest factors in profit-making in the lumber business. A rather unique system of loading has been devised by the A. W. Burritt Company, of Bridgeport, Conn., in connection with their trucks furnished by the Federal Motor Truck Company, of Detroit, Mich. Singular to say, a one-horse wagon is a great aid to the fast hauling of lumber with this motor truck. A special transferable body has been made by the Burritt Company. This is interchangeable from a one-horse wagon to the Federal truck. The horse-drawn wagon is used in the yard and not for delivery to customers, the horse-wagon being backed up to or drawn alongside of the lumber pile. Onto it is transferred the lumber, piece by piece, by the men in the yard. When it is loaded the horse draws it to a shed equipped with a chain hoist. The chain is hooked into eyebolts at the four corners and the load is hoisted from the wagon. Then the Federal is backed into the shed and the platform with its load lowered onto the truck.

By working in this manner a great deal of efficiency is developed. In other words, there is no lost time for the truck. It is operated to its fullest capacity and customers are served with a rapidity which

W. F. Hurd Company's method of rolling platform and load on to their 4-ton Packard.



A Packard equipped with a body that unloads itself by gravity.

would be impossible if the truck had to wait for a load to be put on it, one piece at a time.

Figures are given below showing the board measure delivered by the Burritt Company in December, 1915, January and February, 1916, showing a total for these three months of nearly a million feet of lumber. To do this amount of business cost $2,100 to deliver, with a traveled distance of 4,122 miles in and out, at a total cost of but $2.18 per thousand feet.

This cost includes every operation from the stock in the storage piles until it is placed in the hands of the customer.

The table below shows the board measure, miles traveled and the customers served:

December 1915 Board Measure Feet	January 1916 Board Measure Feet	February 1916 Board Measure Feet
186,614	156,450	135,752
202,123	180,570	100,182
388,737	337,020	235,934
Miles	Miles	Miles
792	711	550
632	714	723
1424	1425	1273
Customers Served—		
153	125	99
169	135	131
322	260	230

962,691 feet delivery.

Cost $2,100, 4,122 miles in and out.

Average cost per M. ft. delivered. Stock taken from storage piles and delivered to customers. All cost figures except office work—$2.18.

Since April 1 they have had three 1½-ton Federals in operation on this type of work. (16 feet and under—small order). Longest haul in the three months—20 miles round trip. Most trips are about 2 to 2½ miles away; 4 to 5 miles round trip.

The Company's Crew Cost is as Follows:

	Cost Per Month 25 days
1 Horse (1 single reach wagon)	
1 Driver at .40 per hour	$100.00
1 Foreman to handle orders at $15 per week	62.50
2 Good laborers at $13 per week	108.34
5 Platforms at .50 per week	10.42
2 1½-ton Federals at $8.25 per day	412.50
2 Sets chain hoists at .75 per week	6.25
Total	$700.01

This crew can load for three trucks. The cost of delivery here includes the cost of the one-horse wagon, its driver, a foreman to handle orders, two laborers, five sets of platforms in operation on the two 1½-ton Federals and the two sets of chain hoists. No item, therefore, has been left out which enters into the expense of delivery.

This may give other lumber firms an insight into the proper method of figuring complete costs.

Use of Motor Trucks in the Lumber Industry

By R. G. Enell

Truckage is one of the big factors in the lumber business and is not a simple matter, for loads are bulky, a mixed load is the rule, and to pay profits the loads must be large. Old methods encouraged delay and to maintain any sort of a delivery system it was necessary to have branch yards. I have known of dealers having five yards who, after motorizing, have cut this number down to two. This item alone shows the efficiency of motor trucks. Lumber dealers with trucks are now able to cover wider distances; the many loading devices have speeded up deliveries still further and it is now possible to make one truck do the work of several teams and do it more promptly and economically.

We find many different types of hauling confronting us, as each division of the industry has its haulage problem peculiar to that branch and must be considered separately; nevertheless, you will find wherever a lumberman has put a truck into service he does not go back to horse-drawn equipment, but becomes a truck enthusiast. The time is near at hand when practically all lumber in any form will be moved with motor trucks, as every man engaged in any branch of the lumber industry is naturally desirous of handling his transportation as efficiently and economically as possible and has studied the various forms of transportation. As a result of these investigations the lumberman, especially the retail merchant, is doing away with the horse-drawn equipment and adopting motor trucks. The progress which the motor truck has made in the retail lumber field is partly to be credited to paved streets, while the condition of the country roads has to a certain extent hindered progress in the camp and mill. Nevertheless, the motor truck is rapidly becoming a factor in the rural lumber district. The truck manufacturer realizes the situation and is to-day studying the requirements of the lumber dealer with unusual care.

There are many different problems in connection with lumber delivery trucks which must be taken into consideration; size, length of bodies or platforms, length of wheel base, load capacity, facilities for loading and unloading, and the question of efficiency of tractors and trailers. In some cases a heavy truck is the most adaptable, while in others a light truck may be used to better advantage. In making long hauls with heavy loads, for example, from mill to retail dealer, from retail dealer to large contractor, for suburban haulage, the heavy truck in capacities from 3½ to 5 tons, has proved much more efficient and economical.

On the other hand, the retail lumber dealer has found that in making short hauls to the consumer or to the sash and door builder, where quick delivery is necessary, the light truck with a capacity from one to two tons has proved more efficient.

If a customer calls a retail lumberman on the phone and requests him to rush an order for a few feet of finishing lumber or a few more bundles of shingles, he naturally wishes to oblige his customer and this is one of the many places where a motor truck proves efficient in short hauls. This order can be filled and delivered and the truck will have returned before the horse drawn vehicle is fairly under way.

There is also the important question of loading and unloading. Many lumbermen have devised means of their own which have shown a saving in both time and money in this operation. The motor truck manufacturers are also furnishing modern and improved equipment for hauling lumber. Truck chassis are now being equipped with rollers set in roller bearings and the yard wagon is also similarly equipped, and the load is passed or rolled from the wagon to the motor truck very quickly. These chassis and yard wagons are equipped to prevent the load from slipping when under way and the load is transferred to the truck by turning a crank which controls the rollers, this operation being easily handled by one man. With this system no time is lost with the truck, as when it returns from a trip the yard wagon is ready to transfer another load. Another plan is to use a loading platform equipped with rollers in addition to the yard wagon and the transfer is made without the assistance of the yard wagon directly. Still another efficient method of loading or unloading lumber is by means of double or twin bodies or platforms. With this method one platform is mounted on the yard wagon and loaded while the truck is delivering. The yard wagon is then driven underneath a loading device and by means of a hand-operated hoist is raised a little higher than the level of the truck chassis. When the truck returns it transfers the empty platform to the yard wagon, then backs under the loading device, and the loaded platform is lowered on to the truck and fastened by means of two eye-bolts. When the destination is reached the load is rolled back until it tips to the ground, when the truck drives slowly away dropping the load. This method is used in hauling plain boards, but is not of value in delivering molding, casing, millwork or mixed loads.

The business demand for cheaper transportation has not only evolved the motor truck proper, but several differing forms of the truck unit. One of these forms is known as the semi-trailer. The advantage of the semi-trailer for certain kinds of work is very noticeable, as, for example, a business which ordinarily requires much standing time can profit by this form of delivery because one trailer unit can be loaded while another is out on a delivery route. Two trailers give the best efficiency, one being loaded while the other is being delivered. Breathing spells are unnecessary for the motor truck, and the semi-trailer, particularly in the lumber industry, is an excellent way of reducing standing time. One lumber dealer whom I knew bought a 1½-ton truck using a 14-foot body and with it delivered 131,000 feet of lumber in one month. He subsequently changed his truck into a tractor and used two semi-trailers and by so doing delivered 272,000 feet of lumber, thereby more than doubling the efficiency of his truck.

This use of tractors and trailers has proved very efficient in hauling in different forms, especially with heavy loads ranging from five to fifteen tons, and in hauling logs to the mill. Such tractors and trailers are often equipped with an extension trailer which can be unlocked in the beam connection between the axles and lengthened or shortened to suit the particular requirements, then re-locked. For carrying long logs this trailer has proved particularly efficient.

Of all the various lines studied and analyzed by traffic engineering departments, the lumber industry has probably received the greater attention, due largely to the fact that lumber dealers themselves have

taken exceptional interest in their haulage problems. Careful analyses of all costs have been made; records of motor trucks as compared with horse-drawn equipment made, and in fact everything that a lumber dealer needs to know before he decides upon a motor truck is thus available and ready for his use on application, and I believe that this information will do more than any other argument to influence the prospective purchaser in favor of motor trucks.

Lumbermen are still investigating the efficiency and economy of motor trucks and their experiments are constantly convincing them the time is near when the motor truck and tractor will have solved their transportation problems and the horse-drawn equipment will have become obsolete.

It may be said in conclusion that no single motor truck unit has yet been designed which meets all of the requirements of each lumber dealer's individual demands and that it is only by a careful study of each dealer's problem that an intelligent opinion as to the proper truck in the matter of size and type may be formed. Many of the responsible truck manufacturers maintain a traffic engineering department, whose duty it is to collect, classify and make available for their customers' use, data regarding the adaptability of motor trucks to any given industry. This information is based on actual working results in every line of business, including your own, and will be furnished for your guidance entirely without charge and, unlike most things that cost nothing, is very well worth the serious consideration of lumbermen.

The Pulp Mill's Relation to Lumbering

An Important Factor in Waste Elimination—Utilizing Much of the Woods and Mill Waste of Logging and Sawmilling

By John L. Love

WHEN the late Isaac Watts, hymnologist and divine, composed his well-known metrical assertion about the habits and customs of the "little busy bee" he might very well have added a stanza drawing admiring attention to the wasp. Indeed, the latter could fittingly have had a poem all to itself, seeing that its industry was to lead to a discovery epochal in its results.

With the bee is always associated in our minds the teeming hive of tireless workers, but it is the wasp we have to thank for the establishment of many real "hives of industry" throughout this and other lands. Noticing that the hornet made its paper-like nest from material obtained by boring into the spruce tree, and which it apparently subjected to a semi-digestive process, an observant chemist set about experimenting. The result of his investigations was wood pulp and a new industry of world-wide importance. Once again had nature yielded up one of her simple secrets to be exploited by man in his elaborate and costly fashion. Little by little, however, the elaborate paraphernalia and cost of making wood pulp have been simplified and lessened until to-day the process is probably as uncomplicated as mechanical and chemical skill can make it. That, however, may be a rash statement. Manufacturing processes are as much subject to revolution as monarchies in these times, and to-day's brilliant achievement is apt to pale before to-morrow's startling discovery.

The future of the pulp industry is a subject for the prophets; of more immediate concern is the place of the pulp mill as an eliminator of waste in the lumber business. Many fortunes have been made out of what the other fellow threw away in scratching hard for a living, and it would seem that there is more money in tops and firewood, when they are converted into pulp, than in merchantable lumber.

Logging and Sawmill Waste

Probably no industry sheds so much waste as lumbering. Competent authorities, such as Dr. John S. Bates, head of the Forest Products Laboratories of Canada, estimate the logging waste left in the woods to be about 25 per cent. of the original tree. It is just here that the pulp mill gets in its first good work in its mission of conservation, and that in a double sense. Every lumberman is familiar with the "slash" that marks the trail of the logger through the bush; the tops and branches that are left behind to choke new growth and add to the fire hazard. Where a pulp mill is operated in connection with the sawmill a large proportion of this "slash" is trimmed and sent down the drive with the logs to be made into pulp. Not only is this hitherto absolutely waste material turned into considerably more money value than its bulk in merchantable logs is worth, but the fire risk is reduced considerably.

Waste eradication in the woods is only part of the pulp mill's mission, however. Having accounted for all the tops four inches and up at the narrow end, the mill still has a large field for raw materials to draw upon in the waste from the saws. This waste amounts to about 40 per cent. of the original tree, and only a negligible part of it is used in developing power to operate the plant. A conservative estimate is that the total waste lumber for the pulp mill to work up amounts to between 60 and 70 per cent. of the tree, and of this less than half is available for pulp, but in spite of this margin of quite irreclaimable refuse, the above figures indicate that the pulp mill is doing its bit in the present world-wide campaign to cut out waste, and, incidentally to place the lumber industry on a more stable foundation than its own unaided feet have ever provided, of late years, at any rate.

There is a broad economic aspect to the operations of a pulp mill in addition to that already noted. A mill producing one hundred tons of pulp a day calls for two hundred cords of pulp wood. To provide this raw material requires larger lumbering operations than most concerns cover, and the farmer has to be called in to make good the deficit. Hitherto, clearing his land has been the bane of the farmer's existence, and it has been done largely only as government regulations compelled. Now, under the spur of high and advancing prices for pulpwood, land is being cleared as if by magic, and large sections of the reclaimed surface are being put under crop. The economic aspect of this is obvious. The farmer has more money to spend and industry is benefited right along. To this factor may be added that the pulp

Pulpwood stacking for winter consumption.

Slash left by loggers—Avoided by co-operation between lumber and pulpwood operators.

mill employs proportionately more hands than the manufacture of lumber, the industry it is supposed to supplement.

The Pulp Production Process

Before it is ready to be manufactured into sulphite, the pulpwood must be "rossed" or pealed. As a rule it is purchased in a rossed condition from farmers and jobbers, but when it comes down the drive it has to be cut into lengths of four feet and then peeled. The pulp logs are taken from the water in the same manner as for the sawmill except that they are drawn up horizontally. The chains carry them on to the circular saws and the lengths fall on to a moving platform which carries them either to the barking drums or to the stacker. The latter is a movable elevator whose endless chain stacks the pieces on huge piles which constitute the mill's winter supply of material. Those piles become frozen solid and have to be dynamited and quarried like so much stone.

Pulpwood that is required for immediate use is passed through the barking drum, huge horizontal revolving cylinders fitted with innumerable knife-like strips running their entire length. These cylinders toss and tumble the wood until it passes out, stripped of its bark, into a large tank. From there it is guided and dropped end-on into the slashers, which, in a most expeditious and business-like manner, reduce the shrieking log to chips the size of a man's thumb-nail. As the wood is pulverized it diffuses a most fragrant odor as of pineapple, an odor which is by no means suggestive of the sensation that greets the nose at a later stage of the metamorphosis when chemistry has stepped in to hasten the process of dissolution.

From the slasher house the chips are conveyed to the top of a high structure housing the digesters, and stored in bins until required. From here they are subjected to a cooking process. This cooking, or "digesting," roughly speaking, amounts to the chips being boiled in acid. The operation calls for extreme care, as too much or too little cooking will spoil the entire batch. The time occupied in cooking varies according to the kind of pulp being prepared, but it is seldom less than ten hours. When the batch is sufficiently digested it is run out and put through a straining process that eliminates all knots and woody particles.

The final operation consists of running the pulp over the drying machine. A broad felt web carries the mushy pulp on to the steam-heated cylinders. Up and down, in and out, it passes, from cylinder to cylinder, losing at every foot of the way some more of its moisture until it emerges in one intermediate sheet to be split and gathered into rolls, or cut into squares and packed in bales.

If the product is Kraft pulp it will find its commercial destiny ultimately as wrapping paper; if sulphite, it will pass into the paper mill to appear finally as a sheet of newsprint paper.

Northern B. C. Mills to Have First Monorail System

The coming of December next will likely mark the completion of the new combination spruce, hemlock, and cedar plant being erected at Seal Cove, Prince Rupert, by the Prince Rupert Lumber Company, of which J. S. Emerson, the well-known Vancouver lumberman, is president and principal shareholder. The clearing of the site was commenced late in March, but it was well on in April before Manager E. F. Duby (formerly superintendent of Brunette Sawmills, Ltd., New Westminster), was able to proceed with the foundations, weather conditions being peculiarly unfavorable.

Negotiations for the Seal Cove site—about the only feasible location on the Prince Rupert waterfront for a sawmill proposition of any considerable size—were entered into with the Grand Trunk Pacific Railway authorities about the middle of last year, Mr. Emerson's desire being to have the buildings sheeted over before winter set in. Unlooked-for delays occurred in the framing of a lease satisfactory to both parties, and it was January before matters were finally arranged. The site embraces about eighteen acres of land and water, and includes a small island adjacent to the mainland, which lends itself admirably to the construction plan.

The Sawmill and Its Equipment

The sawmill plant is approximately 50 x 250 feet, two storeys, with heavy timber frame. It will have a double log lift (serving both sawmill and shingle mill), steam stop and loader, Simonson log turner, a 66-inch four block carriage equipped with one of the latest electric-driven power set works, and a 10-foot band mill. The edger, a 10 x 72 inch Pacific Coast type, will be equipped with a mechanical "spotter," which will increase the efficiency and at the same time make the work a great deal lighter for the men operating this machine.

The heavy timbers will be delivered over the main rolls to the timber trimmer (a steam swing-up rig carrying an inserted tooth cut-off saw), thence out the right hand side of the mill to the timber decks. All lumber of smaller dimensions, after passing through the edger, delivers across to the left hand side of the mill and through a 40-foot air-lift trimmer, thence over live rolls to No. 1 sorter, where it is grade-marked, and where all rough lumber orders are taken off the sorter and made into parcels for delivery to storage or the loading platform, as the case may be.

Located on the right hand side of No. 1 sorter are the 10-inch horizontal roller band resaw, pony edger, ready shiplap machine and ready sizer, all served by air-lift jump rolls and transfer chains, and each in turn delivering automatically either back to No. 1 sorter or to No. 2 sorter. The latter parallels No. 1 sorter, but carries the lumber in the opposite direction, delivering to the edge stacks at the charging end of the dry kilns, which are located in direct line with and at some distance in front of the sawmill buildings. All dressed lumber to be air-dried or to be used green is taken off and made into parcel segregations as it passes along No. 2 sorter, the balance going on to the edge stackers, thence to the dry kilns. After being properly kiln-dried the lumber is transferred to the unstacker, which mechanically unloads the kiln cars and elevates the stock to the dry sorter, where it receives the final grading and is collected into units or parcels for shipment or for delivery to the big storage sheds. Four dry kilns will be erected at the start, it being the company's intention to thoroughly dry all grades of lumber turned out.

Monorail and Crane Will Handle Lumber

The handling through the yard will be done by monorail and travelling crane. Extending across the entire plant at right angles to the sorting tables and storage sheds is a 30-foot travelling crane. Running parallel to the sorting tables are the monorails connecting with the crane, which acts as a transfer from one monorail to another. At the extreme western end of the travelling crane track is located a storage shed 85 feet wide by 500 feet long and 40 feet high, and running lengthwise of this shed is a four-track monorail system, carried on beams 40 feet above the floor. Beneath these rails the lumber is stored in original unbroken parcels until it is wanted for shipment, when it is again picked up by the monorail hoist and delivered to the shipping platform. This system affords an expeditious and economical method of handling lumber, and makes possible the storage of a very large quantity on a small ground space. The storage shed is so constructed that it not only affords storage, but also acts as a rapid air drier, the arrangement being such as to accelerate air circulation.

The Shingle Mill and Boiler House

The shingle mill is a building 32 feet wide by 150 feet long, two storeys high, accommodating six machines. It is directly alongside and parallel to the sawmill, with a heavy fire wall between, and the portion of the mills occupied by the log decks are served by one roof, the balance of the buildings being under separate covers. The logs are raised to the mill deck by a log lift and then rolled into a short trough, to be fed to an 86-inch cut-off saw. The mills are so arranged that while they are apparently built together as one unit yet each may be operated entirely independent of the other.

The boiler house is of crib construction, and will contain four 72-inch x 18-foot boilers carrying 160 pounds pressure, supplying steam to the big 750 h.p. twin engine, which will operate the sawmill proper, and to the 225 h.p. twin engine which will be used to drive the shingle mill. The roller band resaw, planers, sorting works, and all other outlying drives are individual or groups, driven by electric motors, as the relative locations of the machines may require, electrical energy being supplied by the city of Prince Rupert at extremely favorable rates. Another feature in connection with the steam plant is the fuel storage bin, which is located near the boiler house. Into this bin all sawdust and planer shavings are delivered, the fuel being thoroughly mixed in the process. It is then carried by conveyor to the boiler room, where each individual furnace may be fed as much or as little as is required, any surplus being returned by the same conveyor to the fuel room.

Deep Water Docks to Be Constructed

The company will enjoy excellent transportation facilities over the Grand Trunk Pacific Railway by the means of spur lines to the mills and shipping sheds, while there is sufficient depth of water at the tail end of the mill to float a battleship. It is the intention of the company, when foreign trade develops, to construct deep-water docks from which ocean-going vessels may load. The plant will cater to the prairie trade, but much of the high-grade lumber will, no doubt, be exported. The local trade will also be a large factor in the business, and will be very closely looked after. Boat-building oak will be carried in stock, and it is believed that in the near future an extensive business can be built up in boat material, owing to the rapid development of the fishing industry in the Northern waters.

A box-making plant will, in all probability, be installed as soon as the mills are operating smoothly, and later on attenton will be given to the manufacture of yellow cedar.

The daily capacity of the sawmill, when completed, will be about 150,000 feet board measure, in addition to which a planing mill will be erected of sufficient capacity to take care of all upper grades not disposed of in the export market. The shingle mill will have a capacity of 150,000 shingles per ten-hour day. The supply of timber will be secured from contractors north and south of Prince Rupert, and possibly from Queen Charlotte Islands.

Machinery and Equipment

What Manufacturers of Logging, Sawmill and Woodworking Appliances are Doing

R. G. Long & Company's new plant.

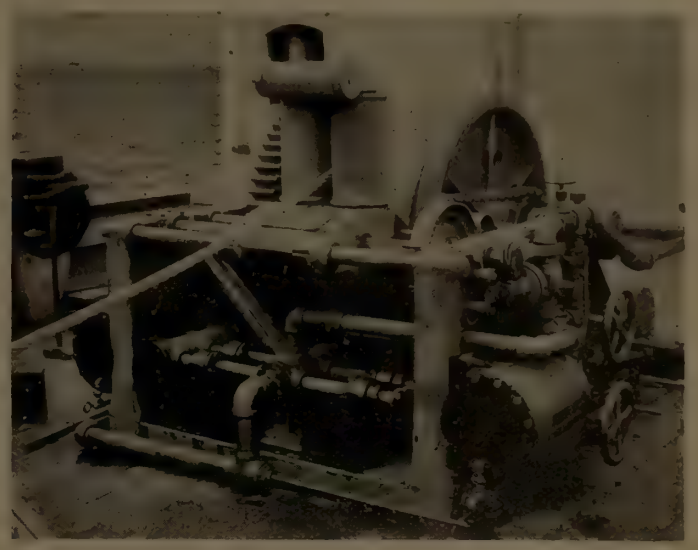
"Bob" Long Gloves, Overalls, Etc.

"Bob Long," union made, gloves and mitts, overalls, shirts, moccasins and high grade knit goods, are known in practically every part of Canada, and nowhere are they appreciated more than among the lumber camps. R. G. Long and Company, Limited, Toronto, who manufacture this excellent line, have erected a fine new five storey building in order to keep up with their increasing business. The popularity of "Bob Long" brands is based solely upon the high quality of material and workmanship used in their production. In the logging camps and sawmills, and even in the retail lumber yards, everyone knows how important it is for the workmen to have suitable and long wearing clothes. The overalls, mitts, etc., turned out by this company have been proved by experience to be the best that it is possible to manufacture, giving the men long wear and a comfortable fit. The same thing applies to the other lines turned out by this company. "Bob Long" is thoroughly acquainted with the camp trade. For a number of years he personally sold camp requirements direct, and thus learned all the fine points of what lumber camp men need and like. R. G. Long and Company have enjoyed such a constantly increasing demand for their goods that they have again found it necessary to extend their plant. This work will probably be commenced in the near future. Readers of the Canada Lumberman who are studying the market for clothing for their employees will do well to get in touch with this progressive firm whose address is 727-733 King Street West, Toronto.

"Bob" Long

The Corbet Automatic Steam Towing Winch

Readers of the Canada Lumberman have become familiar with the Corbet Automatic Steam Towing Winch, manufactured by the Corbet Foundry and Machine Company, Limited, Owen Sound, Ont., through the advertisements published by the company, and through the large number of their machines that are to be seen in operation wherever the towing of logs is carried on. The accompanying illustration represents the company's new design for their Nos. 1, 3 and 4 machines, the engines of which are on the outside of the frame. This permits the building of the larger machines much lower than the others, thus preventing the tipping of the tug when pulling at right angles to the tow, and it also makes it possible to get at the engines much more readily, in the event of any repairs being required.



The Corbet Automatic Steam Towing Winch

The company manufacture these machines in four sizes, and use galvanized steel towing hawser from ¾ ins. diameter up to 1½ ins. diameter, thus being able to accommodate any size of tug. An important feature of their machine is the friction between the drum and the gear, which allows the hawser to be paid out without starting up the engines, and permits the spool to be used for warping purposes without moving the drum. Thus, if the tug is towing a raft or scow with all the hawser out and drum held with the brake-bend, the engines can be run independently of the drum by disengaging the friction. The automatic valve makes it possible to pay out and take in the hawser automatically during rough weather, thus avoiding the danger of parting the hawser and losing the tow. An automatic hawser leader travels to and fro across the front of the machine guiding the hawser and preventing it from climbing on top of itself while being taken in, also allowing the tug to pull at any angle from the tow.

These machines permit the use of steel hawser which has a life of ten years at least, so that it is no longer necessary to purchase a new line each spring. The company report that they installed their first towing machine on the tug "Keenan" four years ago last spring, that it has given perfect satisfaction and that the hawser is just as good to-day as on the day when it was installed. They point out that the owners have thus been saved the cost of four towing lines

which amount alone to the cost of the machine. Similarly satisfactory results have been obtained by many other companies using these machines all over the Great Lakes and on the Atlantic and Pacific Coasts.

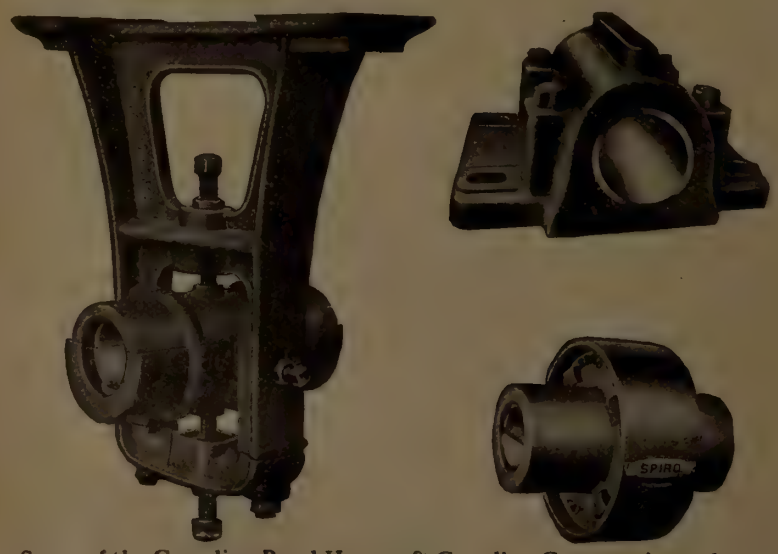
The use of these machines makes it possible to operate a tug with fewer men than formerly. It also permits the tow to be brought up close to the tug without having to back the tug up to the tow or scow; thus giving control in close quarters and preventing frequent trouble and damage.

High Class Transmission Machinery Equipment

Power transmission machinery is one of the most important features in connection with any manufacturing plant. Such equipment as shaft hangers, couplings, pulleys, shafting, pillow blocks, collars, etc., cannót be of too good a quality, if a plant is expected to give satisfactory and economical results. Lumber manufacturers and planing mill operators are intimately acquainted with this fact and will, therefore, be interested in the Bond "Double-Sure" Transmission Line, manufactured by the Canadian Bond Hanger and Coupling Company, Limited, Alexandria, Ont. This line has been on the market for the past quarter of a century and has been used extensively in many of the largest factories in the world. It has been endorsed by engineering departments, which find that it is splendidly designed from a mechanical point of view. Mill superintendents appreciate fully the economy of all the Bond bearings, which is the result of every bearing being babbitted and reamed.

Among the important products manufactured by the Canadian Bond Hanger and Coupling Company, Limited, are the Grundy Patent Flexible Insulated Coupling and the Bond Spiro Compression Coupling patented. The Grundy patented flexible insulated coupling is constructed of three pieces only, the two outer flanges being of cast iron and the centre disk of non-conducting material with lugs on each side for transmitting the power to the outside flanges. The company claim that this coupling will give less trouble and will outwear any other flexible coupling on the market. This is a simple and effective device for connecting the two ends of shafting where it is difficult to get the bearings in perfect alignment, or where they are liable to get out of adjustment.

The Bond Spiro Compression Coupling has the distinctive feature of a spiral slot cut the entire length of the sleeve. This enables the coupling to exert an enormous gripping power, as every square inch of bearing surface on the inner diameter of the sleeve comes in direct contact with the shaft. Another of this company's products, that is of particular interest to sawmill men is the Bond Heavy Rigid Pillow Block, Pacific Type, which is specially designed to meet the requirements of the sawmill trade. This pillow block interlocks the length and width of the bearing, and it is drilled and tapped for grease cups. Another interesting product is the Bond Scientific "Lytestrong" Steel Shaft Hanger. This hanger is folded into shape from sheet steel. It has a number of particularly valuable features which are explained in detail in an interesting booklet entitled "Points of Merit," published by the Bond Foundry and Machine Company, of Manheim, Lancaster County, Pa., U.S.A., the United States works of the Canadian Bond Hanger and Coupling Company, Limited. This booklet also contains illustrations and descriptions of many other of the company's products.



Some of the Canadian Bond Hanger & Coupling Company's products.

Modern Blower Systems

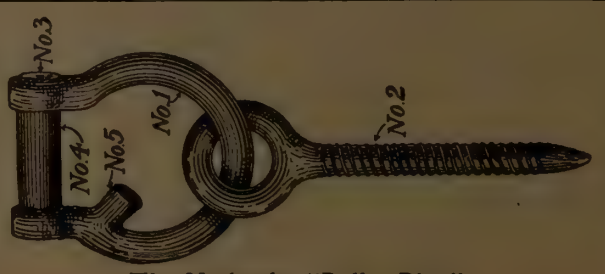
The Toronto Blower Company, 156 Duke Street, Toronto, are well known to readers of the Canada Lumberman through the excellent blower systems which they furnish. They manufacture everything required in the installation of a modern exhaust system, and they furnish skilled mechanics for the work of installation. The "Foster" blower is one of this company's principal products. This fan is of unique design, being a non-centre suction fan. Instead of a centre circular inlet, it has a segmental opening to the rear, immediately adjacent to the discharge duct. The fan wheel is so con-

Showing end view and S.K.F. bearings of 35-in. Blower and Exhauster, equipped with tight and loose special ball-bearing pulleys.

structed that the material entering the fan is immediately discharged, without passing through or around the wheel and they claim that it handles every conceivable material, wet or dry, without clogging, also that it is always in perfect balance. The "Foster" fan has three bearings, shaft extending through, with bearing on the inlet side, thus eliminating the overhung wheel, and avoiding heating, clogging, and shaking. This blower is specially designed for handling shavings, sawdust, excelsior, etc. The Toronto Blower Company also manufacture a complete line of fans, galvanized iron pipe, dust collectors, auto-furnace feeders, hoods for wood-working machines, buffing and polishing wheels. They have had many years practical experience which has enabled them to evolve efficient and correct designs for their various products. Their special heavy sawmill blower, they say, will blow the green sawdust from the low saw to wherever it is to be deposited, with very little power. The company will send an expert engineer of wide experience to inspect plants where installation of exhaust systems is being contemplated, or where alterations or repairs are under consideration.

The Neckyoke Roller Ring

The accompanying illustration represents the Neckyoke "Roller Ring," patented, for which Messrs. Clarke and Andrews, Pembroke, Ont., are agents. This is an article of great interest to all team users. It effects a saving in pole straps and prevents much lost time resulting from horses with sore shoulders. The old style of ring allows nothing for the constant rotating movement of the strap, or for the sudden jerk to which the horse has to respond. To the horse itself, the ring is a great boon. These rings are made from the best material obtainable, and the workmanship is guaranteed. The illustration shows the good points so clearly that they will appeal to all who know anything about the subject. Lumber manufacturers in Canada who have already made use of these rings are enthusiastic in their approval.



The Neckyoke "Roller Ring"

The first tannery built by the company.

A view of the modern belt shop.

Great Oaks From Little Acorns

The Graton & Knight Manufacturing Company, of Worcester, Mass., is one of the best examples of the fact that great industries are invariably the fulfillment of the aims and ideals of their founders. About the year 1847, Mr. Henry C. Graton and Mr. Joseph A. Knight went to Worcester from a neighboring town and secured employment with a card clothing manufacturer who later added a belt shop. Here they worked, making belts until, in 1851, they had saved a few hundred dollars with which they purchased the small belting business. This was the beginning of this great concern.

These two pioneer belt makers for some time comprised the entire organization of the company, currying the rough tanned hides and cutting them into belt strips, which they riveted or laced into leather belting. After a day's labor in the shop, Mr. Graton devoted his evenings to the bookkeeping, while Mr. Knight attended to the correspondence of the concern. When orders were few and the little shop lacked business, Mr. Graton left the currying table and belt bench and went in search of orders. Some of the same customers whom Mr. Graton first sold still have their names on the company's books.

In 1869 an important addition was made to the force of the company, when Mr. Walter M. Spaulding was secured to keep the books, handle correspondence, and assist Mr. Graton and Mr. Knight in selling the goods and filling the orders. Mr. Spaulding is at present the president of the company, and it is in no small measure due to his business ability and good judgment that the company has shown the steady and substantial growth which chacterized it since that time.

The first tannery was built in 1867 and had an annual capacity of a few hundred hides. Now 285,000 hides are tanned annually and manufactured into belting, and hundreds of leather specialties. In place of the two small rooms where the company originated, the Worcester plant consists to-day of twenty buildings closely connected, and having together a total floor space of about 600,000 square feet.

Nearly 1800 are employed in the Worcester plant alone, besides an office force of 200. In addition to the travelling salesmen, there are branch stores and agencies in all the principal cities in the United States and Canada and other large countries. Branch factories have been established in Cleveland and Detroit, to give better service to the western demands upon the organization.

The important relationship between scientific knowledge and practical experience was early recognized by the establishment of completely equipped chemical and mechanical research laboratories. The former thoroughly analyses all raw materials and supervises all tanning processes. Its investigations have effected many important advances in tanning methods. The mechanical department has caused many improvements in the interest of better belting transmission, and it maintains exhaustive records of original investigations as well as practical experience extending over a long period. This department is ready to assist all users of belting in the selection and adoption of the proper belt transmission, and will give anyone requesting it the full benefit of its valuable knowledge.

One of the prime factors in the success of this concern is the fact that they have originated and conscientiously maintained rigid standards of quantity. They manufacture a variety of different brands, each from a particular selection of the hide, and each suited to a different belting need. These so completely cover the entire range of belting requirements that they form a series. After years of careful classification and steady improvement, the characteristics of these brands have been fixed, and they are widely accepted as standards of quality in their line.

In order that no manufactured leather of any nature may leave the plant below the standard of quality which has been decided upon, a thorough system of inspection has been in operation for many years. This has resulted in a feeling of exceptional confidence among the users of belting sold under their trade marks.

Although belting is still the principal product of the plant, the company turn out many excellent specialties, such as textile and automobile strapping, clutch leathers for automobiles, leather packings and gaskets, cut stock for shoe factories, fine bicycle and motorcycle saddles, etc.

There is no better proof of the success of the policy of the founders than the fact that Graton & Knight belts and leather goods are used in the farthest corners of the world.

The imports of wood-pulp into Canada increased from $423,331 worth in 1915 to $552,002 in 1916. All this pulp came from the United States, from which country the importation increased by 74.2 per cent. There were no imports from Sweden in 1916 from which over 100,000 tons came in 1915, nor from Great Britain which sent 745 tons in the same year.

The factory of the Graton & Knight Manufacturing Company as it looks today.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) $2.10 per inch, each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Squares Wanted

Seasoned Birch and Maple, No. 1 Common, also 1sts and 2nds. Size 5 x 5 and 6 x 6.

Huntley Mfg. Company, Limited.

15-15

Wanted

Wanted second-hand timber, Fir, Spruce or Pine. State condition and price. Box 593, Canada Lumberman, Toronto, Ont. 12-15

Pulp Wood Wanted

We are prepared to buy large quantities of pulp wood for export to United States. If you are cutting and want best prices, write to Box 602, Canada Lumberman, Toronto, Ont.

14-15

For Sale-Lumber

Lumber For Sale

300,000 ft. B.M. 1 x 4 and up Clear and No. 1 Spruce.

400,000 ft. B.M. 2 x 4 to 2 x 10 Spruce. Piled widths and lengths separate.

GEO. C. GOODFELLOW,
Montreal, Que.

c

For Sale

100,000 ft. 1 in. dry Cull Birch.
150,000 ft. 3 x 6, 6/16 ft. dry Sixth Quality Spruce.
200,000 ft. 1, 2 and 3 in. C. Cull White Pine.

FRED T. SMITH,
310 Board of Trade Bldg.,
Montreal, Que.

14-17

For Sale—Dry Hemlock

50,000 feet 1 in. x 9 in.
75,000 feet 1 in. x 10 in.
75,000 feet 2 in. x 10 in.
25,000 feet 2 in x 12 in
1,000,000 ft. 1 in. x 4 in. to 12 in. Mill Run White Pine, piled separately.
200,000 ft. 5/4, 6/4, 8/4 in.
Immediate shipment.

F. McGIBBON & SONS,
Sarnia, Ont.

15-15

For Sale-Machinery

For Sale

One second hand sixty horse power return tubular boiler. Apply P. O. Box 669, Haileybury, Ont. 15-15

For Sale

Band saw-mill machinery in our Saw-mill at Lakefield, Ont. Two complete units. Shafting, pulleys, three boilers, etc. For particulars apply The Dickson Co., Ltd., Peterborough, Ont. 15-18

For Sale

One latest improved Wicks No. 10 52 in. Gang, complete with saws and filing equipment, 1 Kilgore Cant Crane, Steam Board Flippers.

GOODMAN LUMBER COMPANY,
Goodman, Wis., U.S.A.

15-t.f.

Machinery and Dry-Kiln Outfit For Sale

Planer and Matcher.
Power-feed Rip-saw.
25 H.P. Motor. d.c.
Heavy Door and Sash Clamp Glue Heater.
Grand Rapids Dry-Kiln Outfit (never been used)

HALEY & SON,
St. Stephen, N.B.

15-t.f.

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

BUILDING SUPERINTENDENT open for position, any kind of construction. Box 603, Canada Lumberman, Toronto, Ont. 14-15

PRACTICAL LUMBERMAN, experienced salesman and capable office man is open for immediate engagement with reliable wholesale firm or manufacturer. Good references. Box 608, Canada Lumberman, Toronto, Ont. 15-16

A PRACTICAL LUMBERMAN, forty years old, with twenty years' experience, is open for engagement June 1, 1917. Last ten years with very large Canadian firm as superintendent and sales manager. Best of references. Box 496, Canada Lumberman, Toronto, Ont. 2-18

YOUNG MAN with 6 years' experience as estimator and draughtsman, capable of working from plans, desires position. At present employed as assistant to superintendent of large factory making all kinds of Doors, Sash, Trim and special Mill Work. Box 612, Canada Lumberman, Toronto, Ont. 15-15

WANTED POSITION as Band Saw Filer or mill superintendent, having 25 years' experience on band saws and mill wright. Will go anywhere for yearly position. Can furnish gilt edge reference. Age 46. Can speak English and French fluently. Box 609, Canada Lumberman, Toronto, Ont. 15-18

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

WANTED MAN to take charge of Planing Mill. One who is capable of setting up machines, filing and grinding pattern knives. Address Drawer F., Sarnia, Ont. 13-t.f.

Wanted—Stenographer

for general work in publishing house; lady, or man ineligible for active service; must transcribe accurately, operate rapidly and be good on detail—an all-round, capable assistant.

Hugh C. MacLean, Limited,
347 Adelaide St. West,
Toronto, Ont.

15-15

Business Chances

For Sale

Timber Limits and Sawmill, estimated fifteen million feet of hardwood and ten million feet soft woods. Sawmill capacity 25 M. feet, shingle mill 125 M. Docks, tug, booms, logging outfit, houses, etc. Price $35,000

The Manitoulin Lumber Co., Ltd.,
Walkerville, Ont

11-22

Sawmill For Sale

Complete Sawmill for sale, cheap and easy terms. Capacity 20,000 feet per day. Field Lumber Company, Limited, Field, Ont. 11-t.f.

For Sale

Planing Mill and Sash and Door Factory complete equipment and a going concern. Situated in Western Canada. Reason for selling to settle an estate. For further particulars write Box 610, Canada Lumberman, Toronto, Ont. 15-15

Saw Mill For Sale

For quick sale, Saw-Mill complete, capacity 20,000 feet per day. Or will sell parts separately. Also two Pulpwood Loaders complete with Upright Boilers and Engines, capacity 500 cords each daily. All machinery in excellent condition. For further particulars apply The James Horrigan Company, Limited, Port Arthur, Ont. 15-18

Jobbers Wanted

We wish to let several contracts to take out logs on Berth No. 6, being broken front lying between the Magnetawan and French Rivers. This berth is all convenient to Canadian Northern Railway.

John Harrison & Sons Company, Limited,
Saw and Planing Mills,
Owen Sound, Ont.

9-t.f.

Mill Plant and Limits For Sale

43 Miles Limits on 31 Mile Lake, Gatineau Valley, containing Basswood, Spruce, Fir, Pine, Cedar, Birch, Maple and Pulpwood.

New Waterous 8 ft. Improved Double Cut Band Mill complete. Steam Alligator, Boats, Sleighs, Wagons, Harness, etc. For further particulars apply to

A. W. STEVENSON,
P. O. Box 2624,
Montreal, Que.

8-t.f.

Miscellaneous

BIG SNAP!

Fifty to Sixty Million Feet of Timber

White Pine, Yellow Pine, Fir, Larch, Spruce and Cedar. Large quantity Cedar Poles. Purchased seven years ago for $32,500. Now worth over $50,000. For quick sale will accept $25,000 cash. Write to Grand Forks Lumber Co., Grand Forks, B. C. 15-16

PROVINCE OF QUEBEC

Department of Lands and Forests

Quebec, 2nd June, 1917

Public notice is hereby given that, in conformity with the law, on the 21st of August next, at 11 o'clock a.m., at the office of the Minister of Lands & Forests Dept., Quebec, there will be offered permits to cut timber on lands belonging to the Crown in the Upper-Ottawa, Lower-Ottawa, St. Maurice, Lake St. John, East and West, Saguenay, Rimouski West and Bonaventure West agencies, comprising several large blocks in the Abitibi, Upper-Ottawa and head waters of the St. Maurice and Gatineau and on River Chamouchouan.

Permits will be adjudged to the highest bidder.

The price of adjudication is payable in 3 equal instalments.

The permit to cut will be subject to the ordinary conditions of the Law and Regulation and the grantees of any of the aforesaid territory must, within a delay of three years, manufacture, in the province of Quebec, with the timber cut in said territory, either pulp or paper in the proportion of ten tons per day, or sawn lumber in the proportion of ten thousand feet board measure per day, per hundred square miles.

Further information may be had by applying to the Department of Lands & Forests.

Elzear-Miville Dechene,
Deputy-Minister,
Dept. of Lands & Forests.

13-16

Administrator's Sale of Saw Mills, Timber Lands, Locations and Chattels

Tenders will be received by the undersigned Administrator up till noon, the Fifteenth day of August next, for the purchase of the Saw Mills, Timber Locations, Lands and Chattels, as hereinafter set out:

PARCEL No. 1

Lands in the Township of Chapman, District of Parry Sound:

Lot 30, Concession 6;
Lot 97, Concession "A";
North Part Lot 30, Concession 5;
Lots 17 and 18, Concession 7.

Timber Location in the Township of Chapman, District of Parry Sound:

Lots 19 and 20, Concession 4;
Lots 17 and 18, Concession 5;
Lots 15 and 16, Concession 6;

All of the above lots corner or adjoin each other, and are near the village of Magnetawan. Timber may be sawn either by erecting a mill at Hungry Lake or by hauling logs to Lake Se-Sebe. Other adjoining locations may be purchased.

PARCEL No. 2

Lands in the Township of Stisted, District of Muskoka:

Lots 9 and 10, Concession 5;
Lots 8, 10, 11, 12 and 13, Con. 6;
Lots 7 and 8, Concession 7;
Lot 6, Concesssion 8;
Lot 6, Concession 9.

Timber Location in the Township of Stisted, District of Muskoka:

Lots 6, 13 and 14, Concession 5;
Lots 2, 3, 4, 5, 6, 7, and 9, Con. 6;
Lot 4, Concession 7.

Sawmill and Machinery; Camps and Contents; Cookery and Contents; Farm Buildings; Farm Implements; Horses; Harness; Sleighs; Wagons; Water Carts; Patent Snow Plow; Mill Accessories; Contents of Filing Room, Blacksmith Shop, etc., all situated on Lots in Stisted Township, and at Martins Siding.

PARCEL No. 3

Saw Mill and Machinery; Booms, Chains, etc., known as the Briese Mill at Skeleton Lake. (Could be moved to Hungry Lake or Magnetawan).

Tenders will be received for any of the above three parcels or for the whole. No Tender necessarily accepted. Tenders must be accompanied by 10 per cent. of the purchase price, which will be returned if not accepted.

For further particulars apply to the London and Western Trusts Company, Limited, Administrators F.C.L. Waller Estate, or to Gibbons, Harper and Gibbons, Solicitors, London, Ont.

15-15

On Working Narrow Band Saws

Very narrow saws do not require to be tensioned to the same extent as wide saws. At the same time it is essential that the toothed edge should not be longer than the back, otherwise when strained on the pulleys the teeth would be slack and the saw would run and dodge in the cut. To lengthen the back the saw must be hammered by a series of light blows on both sides. The blows should fall at uniform distances, and close up to the back edge of the saw. A light, round-nosed hammer should be used, with the saw resting on the anvil. One row of blows will be sufficient for narrow saws, but two or more will be required for wider saws.

Twists and bends are removed by means of blows struck very lightly on the top of the ridge formed by the bend. When removing lumps, bends, or twists by means of a hammer the saw should rest on a block of hard wood placed endways on the grain, or, if the anvil is used, a stout piece of brown paper should be placed between it and the saw. —"Saws: Their Care and Treatment," H. Durham.

Surfacing Short Stuff

As this is an age which necessitates extreme economy in production, we would direct our readers' attention to the great saving which can often be effected in surfacing and jointing short stuff—crooked or otherwise—by the employment of an adjustable automatic feeding attachment. This can be readily fitted to most surfacing machines, and so arranged that it can be readily swung out of the way when not required, when the machine becomes an ordinary hand-jointer. With this attachment not only can about twice the amount of work be done, but it is of more even quality, and there is also immunity from accident to the workman. It is, in fact, in many cases a very paying proposition.

Ideal Wood Rack for Retailers

An ideal commercial wood rack for the office of the retail lumber dealer is one of the latest helps prepared by the trade extension department of the National Lumber Manufacturers' Association The rack has been arranged for the purpose of helping dealers to become more intimately acquainted with the many different commercial woods and to afford an opportunity to interest customers. It contains samples of thirty commercial woods, each marked with a celluloid label. Each sample is treated with a coat of shellac and the frame rack of oak is finished in a mission brown. There is a wood panel below for the name of the firm purchasing the rack.

PHILIP T. COOLIDGE
FORESTER
Technical training and ten years' experience. Timber Estimating and Mapping. Supervision of Lumbering Contracts. Surveying. Forest Planting.
Stetson Building, 31 Central Street
BANGOR, MAINE

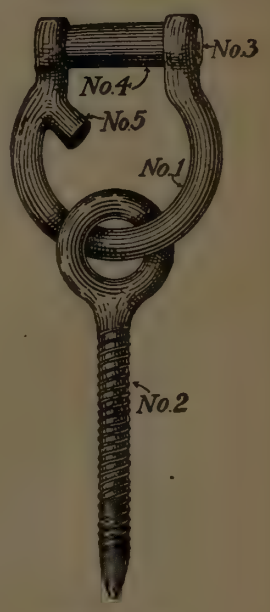
Union Lumber Co.
Limited

White Pine
Red Pine
Spruce
Red and Jack Pine
Lath

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

Neckyoke "Roller Ring"
For Work Teams

Our patented Roller Ring will save its cost in less than a season in pole straps alone, that otherwise would be broken or worn through. It prevents sore shoulders on your horses by taking care of the "play." It relieves the horse in sudden stops and starts and jolting. Our "Roller Rings" are well made and will outlast the ordinary ring in actual wear, besides the great saving to horse and harness. Cost only $1.25 per pair.



Order a trial pair to-day and demonstrate to yourself these advantages

1.—Neckyoke Ring
2.—Heavy Threaded Pin
3.—Steel Rivett
4.—Roller
5.—Little Neckyoke Spur or Strap Protector

The Neck Yoke Roller Ring Co.
CLARKE & ANDREWS
Pembroke - - Ontario

Review of Current Trade Conditions

Ontario

The lumber trade in Ontario has not developed any new factors of importance during the past fortnight, but continues on a basis characterized chiefly by very firm prices and what may be called a normal war-time activity. In the local market—that is to say, the Ontario market proper, as contrasted with the export trade—there is a good demand, especially for good lumber which is in shipping condition. For all such stock that is available the demand is strong and prices are firm. In fact, the price is more a matter of what the owner thinks the stock is worth than what the purchaser is inclined to offer, as such stocks are scarce and much wanted.

The manufacturing trade are making very good enquiries, though most of them are for 1-in. dry lumber. The scarcity of dry inch stock is so marked that manufacturers and wholesalers report a correspondingly good demand for 2-in. stock, which is being resawed at the expense of the purchaser.

The trade with the United States is slackening on account of the decline in building activity. This is directly the result of the war. So long as the United States was not actually one of the Allies its industrial activity was so great that prosperity led to the erection of many houses, as well as warehouses, factories, etc., but with the entry of the United States into the war that country commenced to alter its business activities in much the same manner as they were altered in Canada in 1914. To-day the United States is, with certain well-defined differences, going through much the same situation as that which developed in Canada immediately after the outbreak of the war, and, for the time being, conditions in the lumber trade are none too bright, so far as building is concerned. Speculative building is very quiet, as all building materials are high in price. The lumber trade, however, will have to furnish such extensive stocks for government purposes of all kinds that before long the trade can be counted upon to improve and to develop a similar condition as to prices, available stocks, etc., to that in Canada. Temporarily, however, the demand for Canadian lumber is a little easier.

The outlook in Ontario shows no change; the prevailing opinion is that there is no doubt that lumber will cost more next year than it does to-day, and consequently some of the larger merchants are now covering their requirements freely. The general opinion seems to be that this is a wise course. No one expects to be able to purchase lumber next year even at the high prices that have prevailed this year, and when one considers the difficulties that will face the logging operators next winter, and the great car shortage that is practically certain to develop, there does not seem to be any doubt regarding the course of prices for lumber during the next six months or more.

The retail trade at Ottawa has again found it necessary to advance prices on account of the higher prices that are being asked by manufacturers. The latest advance amounts to about 10 per cent. Ottawa wholesalers are apparently in doubt as to the course of prices during the next few weeks, and are refraining from making quotations for anything except actual spot business. There have been fairly heavy shipments of lumber to the United States during the past fortnight, at good prices. The demand is mostly for lumber suitable for camp construction purposes. Prices of dry stock continue firm, with an upward tendency.

Eastern Canada

The lumber trade at Montreal has been somewhat quieter during the past fortnight than formerly, chiefly owing to the fact that a number of manufacturers have completed their shell box contracts and very few new ones have been placed. Musical instrument manufacturers are very busy, and are finding difficulty in obtaining their raw material from the United States. Although the car situation is not so bad as it was a few months ago, there is still considerable difficulty in getting shipments forward. The trade with the United States continues quite active and is taking large quantities of stock which formerly was exported to the United Kingdom. The shipbuilding business is growing more active and numerous orders for shipbuilding timbers are being placed. The export trade with Great Britain continues in the same condition as previously. Only a few cars of hardwood and spruce are going forward, on government account. Recently the embargo upon Canadian timber in Great Britain was discussed in the British House of Commons and although no definite promises were made the official reply indicated that there was a possibility of the stringency of the embargo being reduced in the near future.

The trade at St. John, N.B., has slackened greatly during the past few weeks. The quantity of stock shipped by rail to the United States is only about one-quarter of what it formerly was. There is a fair demand for only one line of Canadian stock in the United States and that is spruce boards. These are a little firmer in price than they were a fortnight ago. Other lines have receded slightly in price. Lath also are easier, and the demand for shingles has fallen off. There is nothing new to report in connection with the English market for spruce deals. Everybody is still wondering what the English Government will do in regard to the deal situation. Some mills have very large stock piled up, and may be forced to shut down within the next month or two unless some of it is moved. The effect upon next winter's operations is likely to be serious unless the uncertainty is removed. The reported removal of the English embargo, permitting deckloads of Canadian timber to be imported into England, and the removal of the price restrictions, are expected to improve matters and clear the air for Eastern operators. Fuller details on this development are being awaited eagerly.

Eastern spruce mills continue very busy on government orders, and the demand from private sources has also been increasing lately, so that stocks are not able to accumulate at the mills. The base quotation on frames is being maintained without any difficulty at $36. It is reported that some of the Canadian mills are a little more anxious for orders than others, and are offering stocks on the United States markets at a slight reduction. Boards continue firm. Southern rooters are scarce and expensive, and Eastern manufacturers are finding little difficulty in selling everything they have to offer along this line. Matched boards and random are both strong and in good demand. Present indications are that the general trend of spruce prices in Eastern markets will be upward during the balance of the season. The hemlock market is in much the same situation as spruce, only stronger. Government requirements have reduced mill stocks greatly, and retailers are finding it difficult to obtain what they need. Manufacturers, moreover, are having trouble in securing enough labor to keep production up to its present level. The demand for shingles at Boston is quiet, but sellers are holding prices firm. The lath market is quiet, and no price changes are reported.

Great Britain

In connection with the lumber market in Great Britain the most important event of the past fortnight was the announcement which reached Canada by cable about July 23 that the British Board of Trade has removed the restrictions on the importation of timber from Canada to the extent of permitting deckloads of Canadian timber to be imported without licenses. Furthermore, the cable announces that the January 31 price restriction will not apply upon timber imported from Canada after July 19. This is the most welcome news that exporters in Canada have received since the imposition of the embargoes, and it is expected that the British market will now take fairly extensive quantities of Canadian timbers. Almost coincident with the receipt of this cable, merchants in Canada began to receive enquiries from English importers, and everything points to a partial revival of this important trade. While deckloads will not by any means take up as much timber as was formerly shipped when there was no restriction whatever, they will permit a quite extensive trade. It is presumed that the Admiralty will regulate these shipments pretty closely, indicating exactly what stock is to be put on board. Vessels which are loaded beneath the deck with foodstuffs, munitions, etc., will take on a deckload of lumber, and probably the Admiralty will make use of such suitable stocks as are quickly available at the port when the vessel is being loaded. The last shipments of timber from Canada, previous to the embargo, were on a freight rate of about 300s. per standard. To-day the shipping companies are asking 350s., which amounts to about $47 a thousand feet.

The timber trade at London has been exceedingly dull of late. Stocks of imported wood are very light, really amounting to practically nothing. At the London docks there has been a little more activity, government cargoes of wood goods arriving from Norway, Sweden, and Canada. The importing trade has had practically no interest in these shipments, however. The spruce market at Liverpool has been practically dead, but there is considerable hope now that further arrivals of moderate proportions will be reported, since the removal of the embargo has been announced. The imports of Scandinavian goods have not been heavy, the market appearing to be very uncertain in regard to the outlook for this particular line. Stocks of Quebec pine deals and birch planks at Liverpool have practically disappeared, and importers will find a bare market to approach with new arrivals.

At Manchester the arrivals of Scandinavian timber have been a

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

little more numerous than formerly, but the trade in Canadian goods has been practically at a standstill.

United States

There is considerable uncertainty about lumber trade conditions in the United States at present. A midsummer lull, which is usual at this time of year, seems to have struck the wholesale trade, and retailers and manufacturers report increasing activity. Lack of definite information regarding the government's intentions relating to price regulation is holding the activity of the market down to some extent, and is encouraging the spread of a belief that prices have touched their highest peak. Orders for Southern yellow pine from the railroads and from the government are coming out extensively, and are more than compensating for the midsummer quietness that prevails in other quarters. While retailers are not extraordinarily active at present, they report a satisfactory volume of business in yellow pine, and it is noticeable that the line yards and large retailers are buying more heavily. Shipments of yellow pine have been large, but much of the stock shipped has been government business. The actual car situation is less satisfactory than it was. Both orders and shipments have exceeded production recently by large amounts, and unshipped orders at 141 mills recently amounted to over 618,000,000 feet. A year ago the orders on hand amounted to only a little over 300,000,000 feet. If the car shortage situation in the Southern States may be taken as an indication, it appears as though the car famine that has been foretold ever since the crisis of January, 1917, is beginning to develop, and there are many who predict that it will be the worst car shortage in history.

Conflicting reports are received in regard to the extent of the trade in white pine at Northern points. Some Buffalo firms report that trade has fallen off, while others still have a large amount of business on hand. There is no doubt about stocks being short, and for this reason the market continues strong. The middle grades are a little firmer than they were a short time ago, and stock is moving fairly well throughout the whole list.

Much of the same conditions prevail at New York, but there is a dropping off in the demand, on account of the building situation being hard hit. North Tonawanda wholesalers and dealers report continued activity in Northern pine, particularly in all common and low-grade stock and pattern lumber. Receipts by lake and rail have been heavy, but not sufficient to affect prices. There is also an increased demand for better grades at North Tonawanda, and a large quantity is being sold for shipbuilding purposes.

Hardwood market conditions have not changed. The demand for all kinds of woods suitable for the production of articles required by the government continues very strong. The slackening in the building demand has been noticeable, more particularly in small projects rather than large ones; and, as hardwoods are used in large buildings more than in small ones, the dropping off in the demand has not been greatly felt as yet. The price situation continues quite strong.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

St. John Trade in a Quandary

St. John, N.B., July 23—(Special to the Canada Lumberman):—From a selling and shipping point of view the lumber market at St. John is very dead. Up to the last two or three weeks considerable stock was being "carred" to United States points, but of late this has been cut down to about 25 per cent. of what it was, caused by a slackening in demand and reduction in price. It is understood that all United States war orders must be shipped from United States mills. This cuts out the Canadian shipper. Moreover, as prices of all materials going into house construction have advanced, the builder is placed in a difficult position because it is almost impossible to find buyers for houses erected at the high prices. The only stock that is firm and in good demand in the American market is spruce boards. These, if anything, are higher in price than two weeks ago. The rest of the sizes in 2 and 3 inch have receded in price about $3.00 per M. feet. Laths have also become a drug on the market and buyers in New England are hard to find. Shingles have receded in price and the demand for them has fallen off.

The English deal market remains unchanged. No stocks are moving and no prices are being offered, as buyers are not taking any further risk until a definite change comes. If the governments purchase any stock of deals, they will find the steamers. If they do not, it is a question what will be done with deals now at mills. Some mills are badly piled up and if stock is not moved during the next two months, the owners will be forced to shut down. It is of no use to quote prices on deals, as no buyers can be found, but as largely all mills at St. John had sold their season's cut, they do not feel the pinch of conditions quite so much.

What the outcome for another year will be is impossible to tell. At this time of the year a decision must be made as to future logging operations. Never were the mill men in such a position before; no price and no market. If any logs are cut under the present conditions it will be purely gambling on the future turning the right way.

Montreal Trade a Little Easier

Montreal, July 26: (Special to the Canada Lumberman).—Business, except for that with the United States, has slightly receded. Building is still at a low ebb, and the demand for shell box lumber is not as brisk as usual, owing to the expiration of some of the contracts. One or two orders have recently been placed, but they are not of sufficient importance to counterbalance those which have run out. The report is that no further large contracts will be given until September. The commercial box section is fairly good. Piano manufacturers state that they have all the business they can handle, but that they are held back on account of the difficulty of securing material from the United States.

Some wholesalers report that the car situation is by no means satisfactory, and it would appear that while one or two lines are giving good service, others are very slow in forwarding shipments.

Enquiries from the United States are still numerous, and trade with firms over the border is a very important factor in the general situation. The States are proving splendid outlets for the stocks of firms which previously exported to the United Kingdom, but now find the European markets closed.

Shipbuilding projects continue to increase. British and Montreal interests are likely to establish, at a Maritime province port, the largest shipbuilding yard and dry dock in Canada. There are plenty of orders placed in this city for timber for shipbuilding purposes, but owing to the demand in British Columbia for lumber, there is difficulty in securing stock. The edict of the Imperial Munitions Board prohibiting the use of B. C. fir in long lengths for ships built in Quebec is also a hindrance to business.

There is no improvement in exports to the United Kingdom. Occasional cars of hardwood and spruce are being shipped for government account. The question of relaxing the restrictions on exports has been taken up in the British House of Commons, but the official reply is not encouraging. Meanwhile some exporters are disposing of a portion of their lumber to Canadian and United States buyers.

Ottawa Retailers Asking for Ten Per Cent. More

Ottawa, July 23—(Special to the Canada Lumberman):—An advance of about ten per cent. with the retail trade, on practically all grades of lumber, has taken place in Ottawa during the last two weeks. Retailers claim that the steadily advancing manufacturers' prices have forced them to make higher quotations on their stocks. The manufacturers' prices, while not showing a great sudden advance, have been steadily climbing upwards for over a year.

The market situation during the past three weeks has been somewhat unusual and it is hard to determine what the outcome will be regarding relations between wholesaler and retailer. On one hand the manufacturers report a good season. The wholesale trade appears anxious to obtain new lumber, but the retailer says that he often cannot get quotations from wholesalers for the green cut. Considering the whole situation, it appears as if the wholesaler is holding back and seeking to find out what prices the next few weeks will be.

Though the usual midsummer lull is on there are indications of more activity this year than last. A keen desire is in evidence to determine what the fall operations and new orders from the United States will amount to. Some heavy shipments of lumber have left Ottawa during the last three weeks for destination in the United States. A United States buyer called on a retail firm here six months ago and wanted to place a large order, but on receiving quotation said the retailer was "crazy" to quote such a figure. Last week he returned

You Can Increase Your Present Production—with Less Help

By Installing JEFFREY LABOR SAVING CONVEYERS

For handling your Logs, Lumber, Refuse, Pulp Wood, and other materials

Nowhere in the Sawmill or Woodworking Plant is there an opportunity for Bigger Savings.

With Labor scarcer than ever before and Wages on the upward trend, the substitution of mechanical methods for the hand operations is an absolute necessity.

Let Jeffrey Engineers help you to prepare your plant to meet the extreme business conditions. As a preliminary, write for our Catalogs.

The Jeffrey Mfg. Co., Canadian Branch and Wareroom: **Montreal**

Handle Lumber for DISSTON SAWS made in Disston Mill

Portion of Apple Logs in the Disston yards ready to be sawn into boards from which saw handles will be made

Carload after carload of logs come into the Disston plant almost continuously to be made into handles for Disston Hand Saws and parts of other Disston Tools.

These logs are sawn into boards **in our own saw mill.**

Thus, not only are Disston mill saws constructed along scientifically correct lines, but they are constantly subject to practical test in the Disston plant.

Well made saws thoroughly tested are the saws for economy and satisfaction.

Henry Disston & Sons
Limited
Toronto Canada

TRADE MARK
REG. U. S. PAT. OFF.

and purchased 500,000 feet, paying $4 per M. more than the price quoted six months ago.

Inquiries from the United States have increased during the past two weeks and many of them are leading to sales and opening up new export channels. The demand is chiefly for lumber suitable for camp construction purposes and generally the lower rough grades. Dry lumber stocks have not shown a great deal of change since the last report. They are growing smaller, but the local demand is not heavy. Prices remain firm with an upward tendency, and there appears to be little indication of a decline in price. Mr. P. C. Walker, on his return from a visit to western Canada characterized the present situation as "a strong lumber market."

Work on shell boxes is keeping several of the mills busy and using up the dry lumber stocks. The Estate of James Davidson this month completed 60,000 9.2 boxes, and have secured new contracts for 15,000 six inch and 10,000 Bethlehem boxes. This plan will have its men in the woods by the middle of August, and two new camps with equipment for seventy-five men each will be put into operation. The John R. Booth plant, on account of European export channels being closed continues to make a light sawing cut, their mill now working only during the day. W. C. Edwards & Company say that business is good and their mills are having a good season's operations.

Glasgow Market Report

Cant & Kemp, Glasgow, Scotland, in their timber market report, under date of July 3rd, say:—

Wagon Oak Planks.—Stocks have been exhausted for some time, and as no licenses to import have been granted, no prices can be quoted.

Ash.—There are no stocks in first hands. Quotations are:—From 8s. to 8s. 6d. per cubic foot for first class logs, and from 7s. to 10s. per cubic foot for boards and planks, according to quality and specification.

Birch.—The demand for logs and planks is still good and stocks are very light.

Quebec Yellow Pine Deals, etc.—The turnover is confined to second-hand parcels as first-hand stocks are practically exhausted. Quotations are nominal and are as follows:—Firsts—Broads, 6s. 10d. to 7s. 3d. regulars, 6s. 1d. to 6s. 4d.; undersized, 4s. 9d. to 5s.; Seconds—broads and regulars, 5s. 2d. to 5s. 9d.; undersized, 4s. 3d. to 4s. 6d.; Thirds—broads and regulars, 4s. 5d. to 4s. 9d.; undersized, 4s. to 4s. 2d.; Fourths—broads and regulars, 4s. 1d. to 4s. 4d.; undersized, 3s. 10d. to 3s. 11d.; good sidings, 6s. to 7s.—all per cubic foot according to quality and specification.

Quebec Spruce Deals.—Stored stocks in merchants' hands are rapidly diminishing. Nominal quotations are:—9 inches and up, 4s. to 4s. 6d.; 8 inches and under, 3s. 7d. to 3s. 10½d.—all per cubic foot.

Lower Port Pine and Spruce.—The stock is being steadily reduced. Nominal quotations are:—9 inches and up, 3s. 11d. to 4s. 5d.; 8 inches and under, 3s. 6d. to 3s. 9d.—all per cubic foot.

Boston Market Conditions

In a letter to the Canada Lumberman, the Shepard and Morse Lumber Company, Boston, Mass., say:—

The particular developments in trade conditions of late are the great falling off in the demand in the United States for building material for ordinary dwelling house purposes and an increased demand for boards of various thicknesses for boxing and crating purposes, for factory flooring, and other classes of stock to be used in building extensions to factories. Some yard men are very busy with large orders for the barracks for soldiers or orders for shell boxes, crating and things of that sort, while others, who are in the country, and depend largely on the local building trade, are doing very little.

The prices on eastern spruce have fallen off quite a little of late on everything except lumber 1 inch in thickness or thinner, which is used for boxing and crating. House frames, dimension stock and lumber for ordinary building purposes, are easy and there are many mills that would like to ship. It is a question whether the falling off in the general building trade throughout the country will be offset by the demand for lumber for barracks, or cantonments as they are now called, and for crating and boxing and things of that sort.

In Canada, we believe, when the war started, the dullness in Montreal and other large cities in the building trade was more than offset by the demand for material for war purposes and prices kept on advancing. It appears to us now that the proportion on the building trades to the war requirements would be different in the United States, and we are inclined to think that prices cannot advance much further. In fact, there has been some recession on eastern lumber, as above mentioned.

Also, there is a matter of quite a good deal of concern, brought about by the constant embargoes on lumber shipments. For instance, a good many shippers of southern pine, of the roofer grade of boards, took orders last fall and winter and have been unable to ship the lumber on account ot the constant embargoes. The prices on these roofers have now advanced, probably largely because of the government's buying southern pine, and it is impossible now for these shippers to buy more stock and fill their old orders without making heavy losses. They have more or less been able to ship lumber they had on hand to fill these old orders, to points that were not embargoed in other sections, which they had to do or they would have had no money to pay their bills as they went along, and keep their men busy until the embargo is lifted, if it ever is. When they are again able to ship their goods they will not have the goods to ship without running against a big loss. Under these circumstances what the general strikes, fires and other liability clause which is usually in such sales will allow the shippers to do is uncertain. We think, however, there are many orders—thousands of carloads of this sort, which have been sold and which cannot be delivered, and the people who took the orders are very likely going to be unable to deliver them when the embargoes are raised. We had supposed the embargoes would be lifted this summer, but they seem to be as tight as ever and it is very disturbing to business, and it is bringing forward a call for a new code of morals, some people feeling that under the circumstances they are not responsible to fill their old orders so taken. Certainly they are not responsible to fill them until the embargo is lifted.

On the other hand the purchasers are taking it pretty good naturedly and are asking for shipments, and demanding them of late. Perhaps they realize the situation fully and see the futility of making such demands. In every way conditions are very much upset and uncertain here, at present.

Southern Hardwoods Market Report

The Hardwood Manufacturers' Association of the United States in their market letter, under date of July 21, say:—The hardwood situation is without precedent as to demand, supply and existing shipping facilities. The demand is greater than at any time in the history of the trade and there is being offered more business than the manufacturers can take care of.

There has been a very marked slump in building operations. This was reflected in the decrease of 34.4 per cent. in building permits taken out during June, as compared with the same period last year. The unprecedented demand by the Government for all kinds of lumber will, however, more than offset the decreased volume of normal building.

Shipments from the mills to market are being delayed by the car shortage and embargoes, but think what the situation will be when the movement of troops and Government materials is in full swing. It has been authoritatively stated that the Government will soon be using 75 per cent. of the total available railroad equipment in the country. We believe that every consumer of lumber who expects to run his plant during the fall and winter months is making a very serious mistake by not getting in transit now all the lumber that he can possibly handle.

Production at mills, particularly in the southern territory, is still below normal. A close examination of stocks on hand will reveal a decided shortage. June sales reports indicate that a very large proportion of the lumber at mills is sold and that a large percentage of the mills will have to run for the next sixty to ninety days at full capacity in order to put enough stock on sticks to take care of their present business. Lack of shipping facilities is creating an active shortage of stocks in many markets and despite the efforts of manufacturers, production is not getting ahead of shipments, and because of the present labor shortage, there is not much promise of improvement in the future.

Oak:—Everything in oak is active with the demand far in excess of the suply, prices remain firm and all changes are toward higher levels. The furniture manufacturers are turning more strongly to oak than ever. Construction material, bill stock of all grades and all lower grades suitable for crating and boxes are in good demand. The general demand for all upper grades continues good, quartered oak having shown considerable improvement. Timbers and special cuttings are exceptionally strong. This applies also to railroad car material.

Poplar:—The market for poplar is very firm. Buying on the part of dealers is good and all recent advances hold strong. Wide poplar and poplar box boards constitute a marked feature of the market at this time. In fact, there is absolutely no dull item in poplar. Every thickness and every grade is moving just as fast as mills can get a car to load it in.

Basswood:—It is almost impossible to get enough basswood to supply the trade. The demand still continues active. Stocks are low and prices remain firm.

Chestnut:—Sound wormy and No. 3 common in all thicknesses are in very strong demand and prices firm. 4/4 Fas chestnut is quiet with the thicker stock of that grade fairly active.

Gum:—The Gum Lumber Manufacturers' Association reports that June sales exceeded May sales by over 8,000,000 feet, indicating

POINT

TO

it on the bundle, and satisfy your customers

And when YOU buy

Red Cedar Shingles

order of the mills that make the "INSPECTED" kind.

HERE THEY ARE:

Aloha Lumber Company	Aloha, Wash.
Alger Shingle Company	Sedro-Woolley, Wash.
The Atlas Lumber Company	Seattle, Wash.
Baker River Lumber Company	Concrete, Wash.
Bratlie-McClelland Mill Company	Ridgefield, Wash.
C. A. Blackman & Company	Everett, Wash.
Bloedel Donovan Lumber Mills	Seattle, Wash.
Cherry Valley Shingle Company	Duvall, Wash.
Case Shingle & Lumber Company	Raymond, Wash.
Clear Lake Lumber Company	Clear Lake, Wash.
Cory Shingle Company	Sedro-Woolley, Wash.
Craft Shingle Company	McCleary, Wash.
Day Lumber Company	Big Lake, Wash.
Doty Lumber & Shingle Company	Doty, Wash.
F. G. Deming Lumber & Shingle Co.	Markham, Wash.
Garner Shingle Company	Everett, Wash.
Grays Harbor Shingle Company	Aberdeen, Wash.
Hillview Shingle Company	Montesano, Wash.
Jamison Lumber & Shingle Company	Everett, Wash.
John McMaster Shingle Company	Seattle, Wash.
L. B. Menefee Lumber Company	Portland, Oregon
North Western Lumber Company	Hoquiam, Wash.
Puget Sound Saw Mills & Shingle Co.	Bellingham, Wash.
Pacific Timber Company	Everett, Wash.
Stearns Lumber & Shingle Company	Stearnsville, Wash.
M. R. Smith Lumber & Shingle Co.	Kansas City, Mo.
Sauk Shingle Company	Sauk, Wash.
Sunset Shingle Company	Montesano, Wash.
St. Paul & Tacoma Lumber Company	Tacoma, Wash.
Three Lakes Lumber Company	Three Lakes, Wash.
Two Lakes Mill Company	Seattle, Wash.
The Wilcox Shingle Company	Aberdeen, Wash.
A. P. Allison & Company	Vancouver, B.C.
Canadian Western Lumber Company, Ltd.	Fraser Mills, B.C.
Huntting-Merritt Lumber Company, Ltd.	Vancouver, B.C.
Pitt River Shingle Company	Port Moody, B.C.
Port Moody Shingle Company	Port Moody, B.C.
Stoltze Manufacturing Company	Vancouver, B.C.
Charles W. Tait & Company, Limited	New Westminster, B.C.
Thurston-Flavelle Lumber Company	Port Moody, B.C.
Vancouver Lumber Company, Limited	Vancouver, B.C.
Westminster Mill Company, Limited	New Westminster, B.C.

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THE 1917 FOLDER IS NOW READY; Contains the University of Washington fire test, fully illustrated. Proves that patent roofings are the real fire menace. For this and other Dealer Helps and information write to

Shingle Branch

West Coast Lumbermen's Association

SEATTLE (Henry Bldg.) WASH.

Registered

N

Trade Mark

Inventory of Stock FOR SALE

BIRCH

Over One Year on Sticks

8/4 Firsts and Seconds, 4 cars.
10/4 Firsts and Seconds, 1 car.
12/4 Firsts and Seconds, 1 car.

8/4 No. 1 Common, 4 cars.
10/4 No. 1 Common, 1 car.
12/4 No. 1 Common, 2 cars.

8/4 No. 2 Common, 6 cars.
10/4 No. 2 Common, 1 car.
12/4 No. 2 Common, 3 cars.

8/4 No. 3 Common, 3 cars.
10/4 No. 3 Common, 1 car.
12/4 No. 3 Common, 1 car.

16/4 Sound Boxed Hearts, 5 cars.
20/4 Sound Boxed Hearts, 1 car.

4/4 Log Run Mill Culls Out, 20 cars.

SPRUCE

1916 Sawing

2 x 4 x 10/16 Merchantable, 4 cars.
2 x 6 x 10/16 Merchantable, 6 cars.
2 x 8 x 10/16 Merchantable, 5 cars.
2 x 10 x 10/16 Merchantable, 4 cars.

1917 Sawing

1 x 4 up 6/16 Merchantable, 10 cars.
2 x 4 x 10/16 Merchantable, 5 cars.
2 x 6 x 10/16 Merchantable, 5 cars.
2 x 7/8 x 10/16 Merchantable, 8 cars.
2 x 9 x 10/16 Merchantable, 1 car.
3 x 4 up 10/16 Merchantable, 30 cars.

If any of the above interest you, will be pleased to quote prices

E. M. NICHOLSON & CO.

202 Board of Trade Building

MONTREAL

that stocks in the consumers' hands are not large and that they have faith in the future market, for such extensive buying at increased prices is not usual in June.

Ash:—Ash is selling freely and all items are in good demand. Stocks are low with no chance for betterment and prices are being held firm.

Cottonwood:—Cottonwood continues in strong demand. Wagon box boards are very active and the call for the lower grades used in box making cannot be supplied.

Liverpool and Manchester Stocks

The following report upon Liverpool and Manchester stocks for the month ending June 30th, 1917, is furnished by H. W. Litghtburne & Co., Liverpool, England.

Spruce and Birch
Month Ending 30th June, 1917.
Liverpool

	Import			Consumption			Stock		
	1915	1916	1917	1915	1916	1917	1915	1916	1917
N.B. & N.S. Spruce & Pine, Stds.	1,610	2,990	320	1,770	1,010	2,220	5,210	7,990	3,920
Birch Logs, Loads	240	220	0	20	160	40	260	420	260
Birch Planks, Stds.	121	164	6	73	91	24	115	376	181
Manchester									
Spruce, Stds.	9,970	3,860	190	2,400	1,740	1,330	10,350	9,040	5,820
Birch Logs, Loads	780	0	0	120	160	120	660	320	60
Birch Planks, Stds.	103	212	0	55	73	61	152	466	303

Stocks in Manchester and Liverpool Combined

	1913	1914	1915	1916	1917	
Spruce						
Manchester	8,400	17,200	10,350	9,040	5,820	
Liverpool	6,970	8,070	5,210	7,990	3,920	
	15,370	25,270	15,560	17,030	9,740	Stds.
Birch Logs						
Manchester	540	1,160	660	320	60	
Liverpool	600	680	260	420	260	
	1,140	1,840	920	740	320	Loads
Birch Planks						
Manchester	485	630	152	466	303	
Liverpool	636	369	115	376	181	
	1,121	999	267	842	484	Stds.

An Enthusiastic Millwright's Results

S. F. Caldwell. Braeside, Ont., Describes Improvements He Has Made to Equipment of Big Mill

The equipment of the mill of Gillies Bros., at Braeside, Ont., was recently thoroughly overhauled and improved under the direction of Mr. S. F. Caldwell, head millwright for Gillies Bros. Mr. Caldwell has taken great pride in the carrying out of this important work, and, in a letter to the Canada Lumberman, says: "You would have to see the mill now to get an idea of the improvements that we have put in since I took charge of the mechanical end of it. We have two single band saws, one pair of twin circulars, 60 in. diameter, one 54 in. gang which runs 260 r.p.m. and two four-saw edgers."

Some time ago Mr. Caldwell had an exceptionally interesting piece of work to carry out, the result of a broken balance wheel in the stock gang. Regarding this Mr. Caldwell says:—"The first balance wheel had a solid hub with six arms and it weighed 6,200 lbs. The pillow block bolts of this wheel broke and the wheel itself followed suit. Looking around for a new wheel we were recommended to use one that looked good to me. It had a rim 9 inches deep, a 10-inch face, and a solid web which was 4 inches thick, between the hub and the rim. It looked like a splendid clean casting. Its weight was 7,200 lbs. We put it on and run it for six months, and the next season we had only run it for one month when it burst into fifty pieces and broke everything on that side of the gang. I would never recommend a solid flywheel again. There must have been a great strain from hub to rim, or it would not have flown into pieces.

"Then I made a drawing of a wheel with a split hub, and sent it to the foundry. It had six arms and 10 in. x 10 in. rim. It weighed about 7,000 lbs. This wheel will never give any trouble.

"There are a hundred and one things in this mill that I have put in to save labor. For putting logs on the twin carriage we have steam log loaders, and similar equipment for the band carriages. Also we have one steam nigger with steam set works for each carriage. We find this works very well. Our band saws are old types, but I have put on improvements which make them as good as some of a later date. I have put in frictions for raising or lowering the top wheel, which also puts on the strain on the saws.

"For a time our edgers gave us trouble. We could not get them to cut straight all the time, so I put chains behind the saws in an iron groove, with short spikes in the attachments of the chains. I used a number 75 Ewert chain. One end of the groove that the chain runs in is moveable, to carry the board in any direction.

"I really cannot give you a good idea of the fine equipment of this mill; it needs to be seen to be appreciated. It is one of the most up-to-date mills in the Ottawa Valley, and is especially easy on men."

Hun Prisoners Work at Lumbering

Canadian Front in France, July 5.—"Eyes lefdt!" "Eyes frondt!" Uttered in gutteral German, these commands sound strangely on a Canadian ear. Stranger still is the mis-en-scene whence they arise. For the non-com. who shouts the order is a hulking Hun in field grey, wearing the Iron Cross, and by his side marches a column of German soldiers. But no Mausers are in their hands, no bayonets at their sides, and the headgear is not that of one regiment.

Blue, red, yellow, white, border the caps of these men, and quite as diverse are the designs of their shoulder straps. Tall and short, fat and thin, many be-spectacled, mingle in this conglomeration of Prussians, Bavarians, Saxons, Wurtemburgers—no longer soldiers, but woodmen marching to dinner. They salute a group of Canadian officers as they pass, and the bully German non-com. in charge is quite evidently glad of a chance to air his authority a bit in public and do a bit of the swanking he was wont to do in the barrack square of Deutschland.

Don't Overwork Selves

It is in a pine forest of France that your correspondent saw these Boches working for the Canadians engaged in forestry work. Working, did I say? Well, imagine thirty-two husky Huns pretending to haul on a rope, leisurely pulling down a tiny jack pine, scarcely more than a sapling, and you can visualize their efforts. How an Ontario farmer would laugh at such "work." However, the Germans do accomplish a little. They quite evidently like this "job," and it confers an appetite and an appreciation of the comfortable huts in which they are housed.

By the roadside stands their own German "koch," and facing him a row of burnished kettles. Brimming with some savory stew, the steam ascends in fragrant clouds. To him in batches of twenty at a time come the prisoners, to fill their dixies and receive each one a generous chunk of bread. Squatting under the trees in this fine weather, they partake of their mid-day meal. Would that Canadians in Bocheland fared half so well. After feeding, several of the Huns produce long-stemmed pipes with china bowls, which they puff contentedly, their enjoyment unimpaired by any thought of the sentries who stand back among the trees in case some forgetful Hun might wander through the sylvan dells.

And what a pine forest is this! Its like does not exist throughout the length and breadth of Canada. A regular fairy-tale wood, this vast plantation of clean trunks, rising almost limbless to an average of fifty feet, green-topped, springing from an underbrushless carpet of moss and needles. They grow in yellow sand, these trees. The larger ones measure from 10 to 14 inches through at the base, and give some 40 feet of log.

Hark, Canadian lumbermen. In this country a stern government allows no timber-limit vandalism on the part of loggers. No brush nor slashing may be scattered about as in Canada, to start fires. Everything here is piled, swept clean. In the adjoining French section of this wood I actually saw windrows made of branches carefully tied together. Thus they are shipped off to Paris for firewood.

Canadians on the Job

In marked contrast to the Huns are the Canadian bushmen, who, overalled, stand in military formation ere they dismiss to lunch. A little group, they have charge of the more technical jobs. Soon a mill will hum in this vicinity, as others are doing elsewhere, turning out its full quota each day. These Canadian mills are not only supplying our own troops, but Imperial and French troops as well.

Canadians are hard at work in forests of beech, hornbeam, ash, oak, birch, cherry and chestnut trees, which are falling before them, and, oddest sight of all, are being pulled down by block and tackle. Such is the French fashion. Limbs chopped off, and a rope attached to its top, many a tree is torn out by the roots, which are afterwards sawn off. Queer lumbering perhaps, but it saves the older trees.

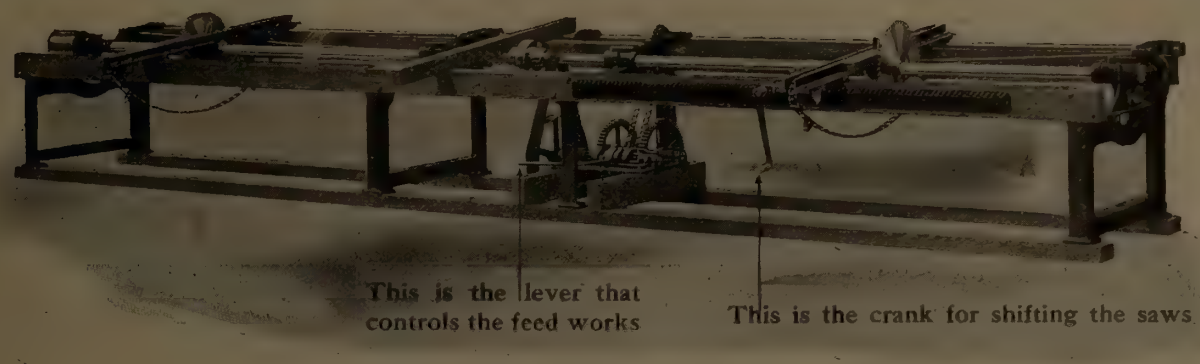
Picture a quaint village, mediaeval church, fifteenth century houses, an inn, from whose timbered doorway d'Artagnan might well sally forth at any moment. Picture an emparked chateau which escaped the revolution, whose pillared gateway was old when Marie Antoinette came joyfully to France. 'Mid such surroundings, among trees where the deer fed undisturbed, now rises a cloud of smoke, beneath which, entrenched among the new, white timbers of a brand new mill, a whirling fiend devours the woods.

Sawdust roads, slab piles, non-day whistles among such sur-

Increase Your Cut, Make your Lumber Sell More Readily, Get More for it per M and Save Freight by installing a

Tower One-Man 2-Saw Trimmer

which squares the ends, cuts the boards to standard or any desired special lengths, and saves freight by removing the waste and, therefore, reducing the weight.



Both saws shift, moving to or from each other at an equal rate.

Two feeds—fast and slow.

The feed can be changed or stopped altogether without stopping the saws.

Made in eighteen different sizes and styles.

HUNDREDS IN USE IN THE STATES.

GORDON HOLLOW BLAST GRATE CO., GREENVILLE, MICHIGAN

Manufacturers of

The Gordon Hollow Blast Grate and the TOWER Line of Edgers and Trimmers.

Finest Chisel Tooth and Solid Saws Made

We are making special Chisel Tooth Saws for every grade of cutting and all machines. Our experience of going on 100 years in this industry is sufficient evidence of saws that are high grade all the time. We also make the world-famous Hoe Solid Tooth Saws which have upheld our reputation in every lumber country of the world. Write for illustrated book giving information about your saws as well as ours. Free to interested Lumbermen.

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NEW YORK CITY

roundings. Sacrilege! Mais c'est la guerre! Alas, modern war is an ogre for timber. But then the trees will grow again; many are ripe for the saw; many more will be left standing. All is being done systematically under governmental supervision.

Valuable Timber

"Builders in Canada would be glad to pay $60 and $70 a thousand feet for this," remarked an Ottawa Valley lumberman, now an officer in charge of one of these mills. He referred to the beautiful, clear beech, which, alas, was being sawn into common planks for roads. "Does seem a shame to see such stuff being wasted when pine or spruce would do just as well. But the army simply has to have it, so we are turning it into lumber as fast as we know how. I sent planks like these, hot from the saw, to build the roads over which our guns were hauled up to Vimy Ridge."

Out of the hardwood Canadian millmen are sawing besides lumber, beams, trench timbers, railway sleepers, firing beams for 9.5 howitzers, etc. Fuel was scarce in the trenches last winter. If the Hun manages to defer his final thrashing until next year the boys in the trenches won't freeze for lack of waste wood. One mill commandant told me he had 1,000 tons of such stuff ready for them.

Canada's Lath and Shingle Production in 1916

Lath, which has a direct relation to lumber, shows, like the latter, a considerable reduction in cut (16.1 per cent.) in 1916, as compared with 1915. While the total cut was smaller the number of species from which lath was made was greater than in 1915.

The lath production during 1916 and 1915, by provinces, was as follows:—

Province	Quantity 1915 M pieces	Quantity 1916 M pieces	Total Value 1916	Average Value Per M 1915	Average Value Per M 1916
Total	**793,226**	**665,588**	**$1,743,940**	**$2.57**	**$2.62**
Ontario	309,022	231,829	727,159	3.00	3.14
New Brunswick	288,951	225,366	547,809	2.40	2.43
Quebec	55,204	67,689	190,206	2.67	2.81
Nova Scotia	59,921	50,205	101,609	2.15	2.02
British Columbia	46,345	45,729	96,900	1.69	2.12
Saskatchewan	23,611	25,061	36,768	2.00	1.47
Manitoba	8,910	17,314	37,323	1.59	2.16
Prince Edward Island	1,262	1,495	4,337	2.89	2.90
Alberta	.....	900	1,829	...	2.03

Spruce lath were produced to the extent of 665,588,000 pieces, as compared with 793,226,000 pieces during 1915. The total value was 1,743,940. The average value per thousand in 1916 was $2.62, and in 1915, $2.57. White pine lath came second on the list with a total production of 261,065,000 pieces, as compared with 320,012,000 pieces in 1915. The total value was $616,624. The average value was $2.36 in 1916 and $2.35 in 1915.

Shingle Output

Though British Columbia increased its shingle cut in 1916 all the other provinces show reductions, with the result that the total was reduced by 6.2 per cent. Cedar composed 96.2 per cent. of the cut, which is in keeping with the position this wood has held for many years in this industry.

The shingle production during 1916 and 1915, by provinces, was as follows:—

Province	Quantity 1915 M	Quantity 1916 M	Total value 1916	Average value per M 1915	Average value per M 1916
Total	**3,089,470**	**2,897,562**	**$5,962,933**	**$1.86**	**$2.06**
British Columbia	1,894,642	2,009,798	4,019,197	1.71	2.00
Quebec	574,797	414,951	966,836	2.20	2.33
New Brunswick	458,987	359,583	724,222	2.00	2.01
Ontario	93,497	76,374	189,422	1.89	2.48
Nova Scotia	30,733	22,772	39,814	1.69	1.75
Prince Edward Island	17,589	13,757	22,758	1.53	1.65
Alberta	18,740	327	684	3.48	2.09

Lumber Business on the St. Croix

A despatch from Calais, Me., says:—A glance along the water front of this city would lead the observer to believe that the lumber shipping business of the St. Croix, which at one time was the leading business of the port, had entirely disappeared, but this is not so, for inquiry reveals the fact that lumber shipments are larger this season than for many years, but they are being made by rail instead of by the picturesque "windjammers" which formerly filled the local docks and wharves. The cost of shipments by schooner has increased so rapidly since the beginning of the European war that manufacturers find more profit and less labor involved in shipping by rail direct from the mills, and this is being done to a greater extent than ever before in the history of the lumber industry on the St. Croix. Of course, the manufacture of lumber has fallen off materially in recent years, but considerable lumber is being manufactured, and the easiest and quickest method of shipping the same is by rail freight. The vessel shipping business of the port is practically at a standstill so far as schooners are concerned, but occasionally a vessel arrives with coal, either for the railroad or local coal dealers.

Savings Effected by Ball-bearings

Absence of Heavy Starting Load Simplifies Power Problem—Greater Speed—Smaller Pulleys

Exhaustive tests in manufacturing plants have demonstrated that transmission losses, due to friction of plain bearings, amount to from 20 to 40 per cent. of the total power used in the plant.

Shafts in cast iron, babbitt or bronze bearings frequently become "set" if the shafting equipment is idle for any length of time. The oil is pressed out of these bearings and it is extremely difficult to start the shaft from rest. Again, when the bearings are operating at normal speed, rubbing friction is constantly consuming power at a sacrifice of efficiency. Ball bearings eliminate all these difficulties.

In ball bearings the starting friction is no greater than the running friction. This is a very important fact for, as it is not necessary to provide for heavier starting loads, a much smaller motor may be used.

In ball bearings rolling friction is practically uniform from rest up to very high speed. On this account ball bearings start with a minimum effort and operate at all times with the highest possible efficiency.

By the use of ball bearing hangers the loss due to friction may be reduced 60 per cent. Where ball bearing hangers are used, the selection of a motor for shop drives reduces itself to the problem of providing for normal machine power consumption only, without the necessity of providing for the heavy overload capacity usually required to "start up."

For example: If machines in the shop normally require 250 horse power to drive, and an additional 50 horse power is consumed by the line shaft in distributing this power, a saving of 50 per cent. of the power required for the line shaft will reduce the total power required by 25 horse power, i.e., 10 per cent. of the total. With a motor costing approximately $9 per horse power, there will be an initial saving of approximately $225 in the motor cost.

So far we have considered only the saving in power and the consequent lower first cost of the driving motor. In addition to the saving in power, which alone is a sufficient item, there is a saving in lubricant. It is necesary to lubricate high grade ball bearings only three or four times each year. The oil or grease supplied to each bearing at such times is considerably less than is generally supplied a babbitt bearing several times a month.

This economy in lubrication results from the fact that the liberal lubricant chamber around the bearing is sealed on both sides to insure the retention of the lubricant, as well as to protect the bearings from the intrusion of shop dust, grit, etc. The seal is such that the lubricant cannot leak out or creep along the shaft to the pulleys and belts, a feature which preserves the efficiency of the belts and eliminates the uncleanliness and annoyance of dripping oil.

In plants where the transmission is exposed to dust, moisture and grit, good ball bearings will give the best of service. All high grade ball bearings have a dust-proof housing which excludes foreign matter and holds the lubricant, since it is oil tight. Cement factories, foundries, woodworking shops and machine shops need these hangers to prevent hot and worn-out bearings.

Most shafting in plain babbitt bearings is run at speeds from 100 to 400 r.p.m., and if run at higher speeds, it is necessary to lubricate the bearings frequently to avoid hot boxes.

The best ball bearings may safely be run at double or triple this speed and the size of the pulleys is cut down so that the rim speed is the same as formerly. A considerable saving in the cost of pulleys can thus be effected.

Or, when operating at increased shaft speed, by keeping the main line pulleys close to their former diameter (thereby increasing the rim speed) narrower and lighter belts can be used. Working along these lines it is possible to effect savings which will minimize the difference in cost between the best ball bearing hangers and plain bearing hangers. And from the moment your plant starts operation, the ball bearing hangers are paying you dividends.

Instances are frequently encountered where a manufacturer is using all his available power and is even operating his engines and boilers or motors at a heavy overload. He constantly faces a complete breakdown of his plant. In order to add more machinery it will be necessary for him to invest considerable money in an extension of his power-generating equipment. If he were to use ball bearing hangers he could cut down his load materially and so have additional power for other purposes.

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FOR EVERY CLASS OF TIMBER

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EDGINGS

Ontario

Hall Brothers, Ltd., timber and lumbermen, Toronto, Ont., have obtained a charter.

The head office of the Hendun Lumber Company has been moved from Timmins, Ont., to Haileybury, Ont. The directors of the company feel that it is in the interests of the company to make this change.

Fire recently broke out in a pile of pine lumber at the sawmills of the St. Lawrence Lumber and Box Company, South Lancaster, Ont. The damage is estimated at about $3,000. The cause of the fire is unknown.

The Standard Chemical Iron and Lumber Company of Canada, Ltd., report that their plant at Longford was not destroyed in the recent fire at that point. The fire was confined to the barrel house and shipping-room, which were destroyed, entailing a loss of about $10,000. The heaviest loss was in stock and inventory, which amounted to about $40,000. All the loss was fully covered by insurance, and has been satisfactorily adjusted.

Midland Wood Products, Ltd., recently incorporated with head offices and plant at Midland, Ont., are successors to Benson & Bray, Ltd., and Playfair & Pratt. The officers are: President, James Playfair; vice-president and managing director D. S. Pratt; secretary-treasurer, Norman L. Playfair; plant manager, M. J. Bray; machinery superintendent, James A. Benson; directors: James A. Benson, M. J. Bray, James Playfair, David S. Pratt, Norman L. Playfair, Dwight J. Turner, and D. L. White. For some time to come the company will be running exclusively on shell boxes but later expect to do a general woodworking business.

Eastern Canada

The Log Supply Company, Ltd., Quebec, P.Q., has obtained a charter.

Damien Lalonde, Reg., lumber manufacturers, Montreal, P.Q., have been registered.

A contract has been awarded for the enlarging of the mills of Price Brothers & Co., Ltd., Kenogami, P.Q. The general contractor is G. B. Mitchell, 10 Cathcart St., Montreal P.Q.

A company has been incorporated at Chester Basin, N.S., under the name of the Chester Basin Shipbuildrs, Ltd. The president is Mr. A. H. Zwicker and the secretary is Mr. Howard Oxner. The company have orders for two vessels.

Extensive alterations are being made to their pulp and paper plants at Jonquieres and Kenogami, P.Q., by Price Bros. & Co., Ltd. One large addition has already been made and construction work for another is now in progress.

The Ernst Shipbuilding Company, Mahone, N.S., has been incorporated, with capital stock of $25,000. The president is Mr. William Duff, Lunenburg, and the secretary is Mr. Arthur Ernst, Mahone. The company have a contract for a 120 foot schooner.

The Lotbiniere Lumber Company, Lyster, P.Q., who recently lost their pulp mill and sash and door factory at Nicolet Falls, P.Q., by fire, report that they were only partially covered by insurance, to the extent of $36,000. They have not yet decided whether they will rebuild.

The Tusket Shipbuilding Company have been incorporated, with head office at Tusket, N.S., and capital stock of $75,000. The company will erect an up-to-date plant and build wooden ships. The president is Mr. Louis N. Fuller, 163 Hollis St., Halifax, N.S., and the secretary is Mr. George W. Edens.

The property of the Delmas Pulp and Paper Company has been taken over by the Peribonka Company, Ltd., with a capital of $1,000,000. The property consists of a ground wood mill and saw and planing mills, situated in the Lake St. John, P.Q., district. The ground wood mill has been idle for about three years while the other mills have been in operation. It is now proposed to re-start the former mill, the new company having purchased the assets from La Banque Nationale.

Western Canada

Fire recently destroyed the plant of Fargey & Smith, lumber dealers, at Belmont, Man.

Fire recently destroyed the factory belonging to the Grande Prairie Sash and Door Company, Grande Prairie, Alta.

The Chisholm Lumber Company, Ltd., has been incorporated, with head office at Edmonton, Alta. and capital stock of $50,000.

The Pacific Mills, Ltd., Ocean Falls, B.C., are increasing the output of their mill. The present output is 75 tons daily, and the company plan to increase it to 120 tons daily by the end of the year.

The C. & C. Shingle Company, Ltd., has been incorporated, with capital stock of $10,000, and head office at Victoria, B.C., to carry on business as manu-

facturers of and dealers in sawlogs, timber, lumber, shingles, wood pulp, and paper of all kinds.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 22nd day of September. 1917, for the purchase of License X1018, to cut 6,833,000 feet of spruce, balsam, and hemlock on an area situated on Link Lake, Range 3, Coast District. Three years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 7th day of September, 1917, for the purchase of License X963, to cut 8,070,260 feet of fir, cedar, hemlock. and spruce on an area adjoining Lot 651, Shelter Arm, Clayoquot District. Three years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for the Province of British Columbia until the 16th day of August, 1917, for the purchase of License X1005, to cut 3,150,000 feet of cedar, spruce, hemlock, and white pine on an area situated on the North Thompson River, near Hellroar Creek. Three years will be allowed for the removal of the timber.

The Beaver Creek Timber Company, Ltd., has been incorporated, with head office at Vancouver, B.C., and capital stock of $100,000, to acquire from John F. Tener and D. A. McCaskill certain timber limits and licenses held by them; also to take over certain agreements respecting timber held by them. Thy will buy, sell, import, export, deal in, and manufacture sawlogs, timber, lumber, shingles, laths, sash and doors, boxes, etc.

The San Juan Timber Company, an extra-provincial company, has been registered under the Companies Act, with head office at 818 Stahlman Building, Third Avenue North, Nashville, Tenn., and provincial office at 918 Government St., Victoria, B.C. The capital stock of the company is $175,000. Mr. Harry G. Lawson, Victoria, is attorney for the company. The powers of the company include buying, selling, and operating timber and timber lands.

The Sea Bird Timber and Logging Company, an extra-provincial company, has been registered under the Companies Act, with head office at 818 Stahlman Building, Third Avenue North, Nashville. Tenn., and provincial head office at 918 Government Street, Victoria, B.C. The capital stock of the company is $150,000. Mr. Harry G. Lawson, Victoria, B.C., is attorney for the company. The powers of the company include the operating of sawmills and other wood or lumber plants.

An Important New Industry

The Canada Stove and Foundry Company, Limited, Ville St. Laurent, Montreal, P.Q., are well known to many lumber manufacturers in Canada because of the excellent products they turn out. It is interesting to note that this company has recently been the cause of a new industry establishing itself in Canada. The company has already built a large enamelling plant for the purpose of enamelling both steel and cast iron stoves, ranges, or any kind of stove parts. They will also have in the near future, a full line of cast iron hollowware, druggists' enamelled sundries in any color. The production of this latter class of goods will be an entirely new industry to Canada. The special grade of enamel which they are using is adapted particularly for chemical work and for resisting strong acids. An interesting product of this nature will be their porcelain enamelled ice-cream containers in sizes ranging from one to forty quarts.

Shippers in this country have reason to congratulate themselves that government measures to lessen the freight car congestion are only of a persuasive nature. In Spain they do things rather differently. There, according to a U. S. Consular report, the freight stations are loaded with merchandise shipments. In order to relieve the congestion the government has authorized the railroads to sell at auction all merchandise not withdrawn by the consignee in five days from the date of its arrival at destination.

A despatch from Aberdeen, Wash., states that the International Union of Timber Workers have made a demand upon sawmills and logging firms which may bring about a strike. The sawmill workers are asking for a minimum daily wage of $3 and an eight-hour day. The loggers want a minimum daily wage of $3.50 and a nine-hour day.

The Hardwood Manufacturers' Association of the United States have published a revised issue of their grading rule book, effective March 1st. The book includes all rules adopted at the last annual meeting, as follows: Planed sawed red gum figured wood; quarter sawed red gum figured wood; selects oak; Fas wormy oak; No. 1 common wormy oak, and core stock.

What appears to be a record price for a carload of white pine lumber at North Tonawanda, N.Y., was obtained recently when the Northern Lumber Company invoiced a car loaded with that species of lumber at $3,024.38. White pine men there say this is the highest price they ever heard of for a carload of white pine.

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The Logging Camp

DURING the past year one thing has stood out above all others in connection with the logging industry in Canada, namely, the fact that whatever other conditions may have affected the quantity of stock taken out of the woods, the labor shortage has rendered it impossible for anyone to operate as extensively or as economically as he desired. There never was a time when the logging business was surrounded by so many restrictions and uncertainties as those of to-day. With peculiar local variations, the same thing is true from one end of Canada to the other, but the difficulty caused by the shortage and inefficiency of labor is common to all parts of the country. In Eastern Canada, especially in those sections which in former years have carried on a large export trade in deals with Great Britain, the situation has been more trying than anywhere else, and to-day its uncertainties are such that no one yet knows to what extent he will be able to operate in the woods next winter; although at this time of year he should be developing and settling upon details of his whole logging plant for 1917-18. In Eastern Canada the export trade with Great Britain was completely shut off by the prohibition upon the import of timber imposed by the British Government which forced manufacturers to look to the United States market where an outlet has been found for much of the stock which in other years went across the Atlantic. Now, with the entry of the United States into the war, the situation is again one of uncertainty, although it is likely that the quantity of Canadian stock disposed of in the United States will be heavy, it is not possible to consider the United States market as even a moderately satisfactory substitute for that of Great Britain.

Much Depending on Export Business

Under these conditions logging operators in eastern Canada are watching the British situation closely, hoping that before long the British Government will find their own interests as well as those of Canada to harmonize in this matter and that the embargoes will be largely removed. The very latest news received before this issue went to press is encouraging in this connection. Meagre as the information so far available is, it appears to be authentic, and to open the way for a certain quantity of exports of Canadian timber exports to Great Britain. A cable despatch states that the British Board of Trade announced that restrictions upon the importation of timber from Canada have been relaxed, allowing timber as deck cargo from Canada without license. The January price restriction, moreover, is not to apply to timber imported from Canada after July 19th. While this will by no means place the trade back on the extensive basis which it formerly occupied, it will give encouragement to the manufacturers in eastern Canada. The whole logging activity of next winter in the east depends very much upon the situation in Great Britain and it is to be hoped that this easing off in the restrictions indicates that further concessions will be found possible in time to enable the loggers to go into the woods with reasonable certainty that there will be a market for their product when it has passed through the mills next summer.

Logging Supplies Still Advancing in Price

Another factor which has had a great deal to do with the logging situation during the past year, and which promises to have even more effect upon it during next winter, is the advancing cost of supplies taken into the woods. This affects eastern, central and western Canada to an equal extent. Food stuffs for men and horses and equipment of all kinds have advanced in price. Practically nothing that goes into a lumber camp can be bought to-day for less than 25 per cent advance on its price of a year or two ago, while in numerous cases advances of 100 per cent. and more have taken place, adding, during last winter somewhere in the neighborhood of $5 a thousand feet to the cost of operation. The increases in cost since that time have been continuous and extensive so that next winter's operations cannot fail to cost proportionately more even than those of 1916-17. While it is now costing much more to feed and keep the men in the bush, the men themselves are not able to perform anything like the same quantity of work as those of a few years ago. The pick of the men from the woods have gone abroad as soldiers or have found work elsewhere. Logging camps last year were manned by the most promiscuous, incapable, and uncertain crews that ever went into the Canadian bush, and during the winter of 1917-18 they will be even less capable. Thus the logging operator is losing, both on account of the high cost of keeping his employees and the reduced output which he is obtaining from them. Relief from this situation cannot be reasonably expected until the war is over and the men commence to return from the battle fields to take their places once more as producers.

The Outlook Uncertain

Taking all these facts into consideration it is neither feasible nor wise to attempt any discussion of the extent to which logging operations will be carried on during the coming winter in Canada. It is only possible to say that each operator will have to be a law unto himself, and watch closely all the factors that have a bearing upon his situation. Considering the likelihood of continued high prices for lumber next year; bearing in mind the problem of transportation which promises to reach a severe crisis during the coming winter and may continue its influence far into 1918; considering the local market conditions and the effect upon them of the severe trials that we are passing through to-day—endeavoring, in fact, to obtain such light as he can upon his own particular trade situation, it is up to each operator to-day to solve his own problem, to take such chances as he feels like taking and to go ahead on his own responsibility absolutely; feeling neither certain nor uncertain of the outcome, but knowing that from the time when the first tree is felled, until the end of 1918, all those difficulties which he has been facing on account of increased operating costs are likely to continue. There is nothing more certain to-day than that until the war has come to an end no improvement in these difficulties can be expected. Loggers and manufacturers alike must continue doing their share to maintain the industry of the country at a high producing level.

All that has been written above is by way of introduction to what is to follow. It is sufficient to call attention to these matters and then to drop them, and pass along to others which will take our attention away from such things and focus it upon pleasanter and more normal subjects. In the logging camp department of this issue we have sought to assemble an interesting series of articles upon subjects of definite interest to loggers. The department contains descriptive and other material of a definite and practical value, covering many of the aspects of the logging industry, and we believe that every reader of the Canada Lumberman will find something of definite interest therein.

Developing B. C. North Coast Timber

Ever since the Grand Trunk Pacific Railway reached its Pacific terminal at the city of Prince Rupert, B.C., the eyes of thoughtful coast lumbermen have been turned toward northern British Columbia and its grand stands of cedar, spruce, hemlock and larch. It was realized that the opening of railway transportation via Edmonton to the ever-expanding markets of the prairies and eastern Canada was bound to mean, in due course, the development of the timber resources tributary to the railway, with all that such activity implies in the way of development of an almost virgin country and, incidentally, competition in the eastern lumber trade at present enjoyed almost exclusively by the coast and mountain manufacturers. In the near future there are bound to be many mills established along the line of railway between the Alberta border and Prince Rupert, and also in the well-timbered territory to be penetrated by the Pacific Great Eastern Railway in its devious route from Squamish, on Vancouver waters to Prince George, the ultimate junction point with the Grand Trunk Pacific, a distance of about 480 miles, of which line a little over one-third is now completed and being operated. Plans are now being perfected for the establishment of a large pulp plant at some suitable northern point, and only recently work was commenced on a large tidewater mill plant on the Prince Rupert waterfront; extensive logging operations were opened up on one of the islands of the Queen Charlottes group, eighty miles out in the Pacific, and renewed activity was developed on the part of owners of three or four

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small spruce mills on the islands, which are shipping to Vancouver.

Another verification of the prediction that important developments are in store for northern British Columbia is now afforded. Mr. J. A. McKercher, a well-known Vancouver lumberman, (president of the Barclay Shingle Company, Limited, Port Haney, B.C.) and several associates, have secured control of the extensive timber holdings of the Granby Consolidated Mining & Smelting Company, Limited, on Alice Arm, about 100 miles north of Prince Rupert, where the latter company's great copper reduction plant is situated. Sixty odd licenses are included in the deal, or approximately about sixty-five square miles of fine spruce, hemlock and cedar timber, most of it tributary to Alice Arm and adjacent waters. The syndicate has taken over the Granby Company's sawmill, installed about four years ago to cut lumber for the various buildings then erected, and men are already at work removing the mill to a more suitable site on the limits, where its operation will not interfere with the activities of the mining company. The mill will be enlarged and will receive new equipment which will about double the present output. The new company will be known as the North Coast Spruce Mills, Limited. This is not Mr. McKercher's first introduction to lumber manufacturing. He built, and operated for a time, the United Lumber & Shingle Company plant at Nanoose Bay, Vancouver Island, afterwards sold to British capitalists and now the property of the Straits Lumber Company. Mr. McKercher left Vancouver for the north on July 3rd, taking with him a number of men headed by George Apker, of Washington, who planned and superintended the erection of the Nanoose mill so satisfactorily that he has been selected to carry out the work for the new company.

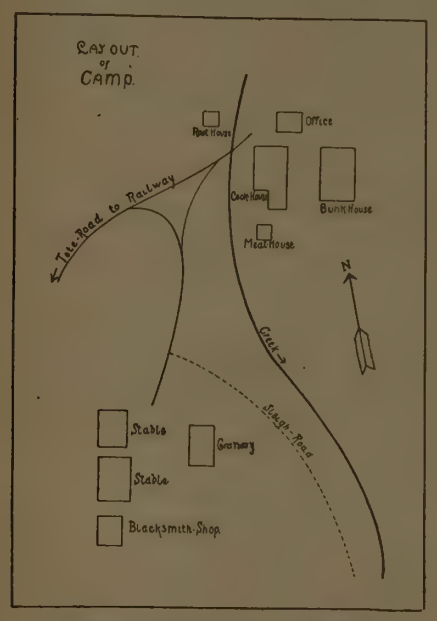
According to the scheme for the development of the great body of timber controlled by the syndicate, the new mill is likely to form merely one unit in a larger plan. The company will be guided by market conditions, and if these continue favorable, it is altogether probable that three or four similar plants—several having box factories in connection—will be established at various points close to the timber. It is believed that a system of this kind, which would permit of the closing of one or more of the mills in case of temporary depression in the industry, is preferable to establishing a mill of large capacity which could not be operated at a suitable profit under unfavorable price conditions.

The new mill will make a specialty of aeroplane stock for the present, the spruce timber on the limits being of a grade that will yield a large percentage of clear lumber. A large wharf is being erected at the mill site, which is in a sheltered cove, so that vessels will be protected in all kinds of weather. The company will ship their rough spruce to the prairie market and have already made application to the Grand Trunk Pacific management for transfer barge service to Prince Rupert.

Logging Operations Throughout the Year

Description of methods in use by the Fassett Lumber Company on privately owned limits in Labelle County, Quebec

By Otto Nieuwejaar*



Layout of One of the Camps

Editor's Note.—The students of the Faculty of Forestry of the University of Toronto, in their graduating year, visit some important logging operation, and, after studying it for some weeks, prepare a detailed report upon the operation. This report is submitted as a part of their year's work. Having already completed their course in forestry, the students are well equipped to prepare reports of this nature. In previous issues of the Canada Lumberman we have had the privilege of publishing extracts from some of these reports. The following report, furnished by the Faculty of Forestry, contains a description of one of the most interesting operations in eastern Canada. After a reference to the location of the operations in the County of Labelle, P.Q., 75 miles west of Montreal, and 50 miles east of Ottawa, the report states that the logging operations are conducted under contract, and then continues, in part, as follows:—

The mill and railway operated by the company are under its own management and the work is organized as follows:

Men in office
Woods Superintendent
Railroad Superintendent
Manager Mill Superintendent
Yard Superintendent
Master Mechanics
Walking-Boss

Everything is reported to the headquarters at once, reports being given by the superintendent every night.

The tract has been logged for eleven years, and it is estimated to yield timber enough for about ten years to come. Only first-class, sound and straight timber is cut for milling purposes, the other is left for use of the chemical plant located at Fassett. The company uses pine, spruce, cedar, hemlock, birch, maple, beech, basswood, oak, elm, and ash.

The timber is transported to the mill by railroad. As the country is very rocky, great difficulties arise in the location of the railroads. The railroad goes from the Ottawa River past the Canadian Pacific Railway line, the mill and chemical plant, in a northwestern direction along the Salmon River, sending a line up the west branch of the Salmon River. The timber is brought down to the railroad by means of sleighs. The manufactured lumber is shipped by way of the Canadian Pacific Railway, or by boats on the Ottawa River.

The laborers are mostly Frenchmen, the rest being Englishmen, Scotchmen, Irishmen, and a few Finlanders. Their wages run about 30 per cent. higher than under normal conditions.

The paid-up capital of the Fassett Lumber Company is $623,000. The company owns, besides the timber area, a mill and the logging railroad. It has no other investments. In Fassett, a very short distance away from the mill, is located a chemical plant belonging to the Standard Chemical Company, which uses nearly all waste products from the mill, and also cuts over the limit after it has been logged by the lumber company.

The mill was built in 1913, as the old mill was destroyed by fire that year. It has a capacity of 100,000 feet per day (10 hours). The power is supplied by a 650 h.p. Corliss engine. The refuse, which cannot be utilized by the chemical plant, is used for fuel material. The mill is equipped with two single cutting, 8-foot bands, automatic trimmer and slashers, and two heavy duty engines. The company also has a planing mill, equipped with planer and matcher, rip-saw and trim-saw. Sawdust is removed by a blower system. Power is supplied from a 125 h.p. engine, which is connected to a 70 kw. generator.

Around the mill there is piling room for about 14,000,000 feet of lumber.

The Logging Contract and the Contractors

All logging operations in the wood (except the railroad transportation) are done by contract.

The contractor, who has signed a contract for all the logging operations on the area, sub-contracts the different localities. He supervises the operations, but the real management of the work in the bush is done by the sub-contractors (jobbers), who employ the men they think sufficient, and otherwise direct the operations on their particular area.

The contract for the cutting of timber and peeling of hemlock bark contains the following main features:—The contractor agrees, in a good, thorough and workman-like manner, to cut down and peel all hemlock trees and parts of trees which will make good, merchantable hemlock bark, and to saw into logs of such lengths as the manager of the Fassett Lumber Company may from time to time direct all the timber trees or parts of trees which will make good, merchantable logs.

These logs are to be delivered to the railroad as the lumber company may from time to time direct for a total stated cost.

The contractor also agrees to peel all hemlock trees over 10 inches at the stump as soon as peeling is possible, on any portion of the land marked out for any season's operation, and to continue this procedure until the hemlock on each season's territory is fully peeled, so that the employees of the Standard Chemical Company can cut all beech, maple, birch, and ironwood of smaller dimensions into chemical wood. The bark shall be peeled, piled and delivered to railroad in a

*Of the 1917 graduating class of the University of Toronto School of Forestry.

TORONTO PLANT

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A Skidway on Fassett Lumber Company's Limits

Steam Log Loader Used by Fassett Lumber Company

specified way for a stated amount per cord. The contractor also has to load the bark on to the cars, if the cars are properly racked.

The contractor has to cut all maple, beech, birch, and ironwood that will make merchantable logs, down to 12 inches top end of a 12-foot butt log, and ash, oak, elm, and butternut down to 10 inches top of a 12-foot butt log.

All the other timber, as pine, basswood, spruce and hemlock are taken down to 6 inches top of a 12-foot butt log, of which the 6-inch and 7-inch logs must be from straight timber.

All the logs have to be cut and skidded as soon as possible. Hemlock logs should be stocked separately to the railroad. The contract also provides for logs to be cut into special lengths, and then to be skidded whenever the Fassett Lumber Company needs them. All logs should be cut 1-in. to 2-in. longer than required. The Quebec Rule should be used for scaling. In case of fire damage the logs delivered to the railway are to be considered legally delivered.

The Fassett Lumber Company agrees to build a main line of railroad as approximately upon the location already pointed out to the contractor, and to build train line up in hollows not exceeding 8 per cent. grade, where there is sufficient timber, so that the expense will not exceed $0.50 per M. feet, this without including cost of rails.

The forest is mixed coniferous and hardwoods, 60 per cent. coniferous and 40 per cent. hardwoods. Of the coniferous the spruces and hemlocks are the leading species, while the birches are by far the most numerous of the hardwoods. The reproduction of hemlock, and to a great extent of spruces, is fairly good.

The following table shows the percentage of felled timber used for different purposes:

Species	Saw Timber Per Cent.	Pulp Per Cent.	Ties Per Cent.
Spruce	80	20	
Pine	100		
Hemlock	80		20
Balsam	50	50	
Cedar	100		
Tamarack	50		50
All hardwoods	100		

The timber is not cut unless it is perfectly sound and free from defects, and is nearly straight.

Topographical Conditions

The logging operation examined was located in a small valley running in a northern direction from the west branch of the Salmon River. A branch of the railroad followed the narrow valley through which the river ran, and to this railroad the logs were hauled.

The valley in which the logging operation was carried on is very hilly and filled with boulders. A small stream runs through it, and the land around this stream is fairly even and boggy. The main hauling roads were therefore located along the stream. But the best stands were found along the hillsides of the valley, and the slopes here are mostly very steep and rocky, thus causing considerable difficulties for the skidding operations. Fortunately the main hauling roads all sloped toward the south or were located on fairly flat country, and only for small distances caused troubles on account of gentle up-slopes. Half the area, however, was difficult to log, due to the many steep grades and the abundance of stones.

Climatic Conditions

On this tract work continues during the entire year, and the climatic conditions are therefore of great importance. The summer is very warm, with little rain. During the months of June and July the men are mostly employed in peeling bark. After this period the felling and skidding operations start, and are carried on till the end of the year. The fall is cold and rainy and practically no snow falls before Christmas. The winter months are generally very cold, with an average snowfall of about 2 to 2½ feet. After the New Year the hauling begins, and is carried on till March. The spring is usually late and rainy. On account of having a railroad the company is able to transport the logs from the bush to the mill during the whole year. This makes the operation easier, as the logs can be left in the forest till needed, thus saving the more expensive storage place near the

(Continued on page 140.)

Emptying Logs into Fassett Lumber Company's Hot Pond

Hot Pond and Part of Fassett Lumber Company's Mill

ONLY
the purest
and freshest
milk from
Ontario
farms is used
in making
KLIM

KLIM

SPELL IT BACKWARD
PURE SEPARATED MILK
IN POWDER FORM
FOR ALL USES
WHERE MILK IS NEEDED

YOU SAVE
Money
Time
Storage Space
Freight
Waste
By using
KLIM

Fresh Milk 'tho a Hundred Miles from the nearest Cow

GOOD, wholesome food is absolutely necessary to the health and contentment of your men in camp. Situated miles from the sources of **fresh** foods, as most camps are, the problem of good cooking becomes a serious one.

Milk is one of the essential foods. The question is **how to get milk** conveniently, and then how to keep it **sweet and fresh.**

The answer is—use KLIM.

KLIM is the milk solids of separated and pasteurized milk reduced to powder form. Only the purest and freshest milk is used in making KLIM—it can be used dry as a powder—just add to the other materials as you would sugar, etc.—or dissolve in water and use in liquid form.

KLIM will remain sweet and fresh until the last atom is used.

KLIM is not affected by weather—if kept dry and cool.

KLIM is packed in special 10 lb. tins for camp use. One pound makes four quarts of liquid.

Try KLIM—we will gladly send you a sample tin—to convince you that KLIM is the purest, most convenient, cheapest, no-waste milk you can buy.

The saving on freight alone—because KLIM bulks small—will reduce your operating expenses.

This illustration represents a tin of KLIM. In this tin is contained the purest and freshest milk reduced to a powder. No matter if you are a thousand miles from the nearest cow, and have KLIM, your cook has milk in the best form for cooking, or use in tea and other beverages.

All the goodness of separated milk is contained in this sanitary tin, and you can use a little at a time as needed, replace the cover and KLIM will keep pure and sweet indefinitely until used.

CANADIAN MILK PRODUCTS, LIMITED

10-12 William Street TORONTO

Plants at Burford, Hickson, Brownsville and Belmont, Ont. Also stocked by W. H. Escott Co., Ltd., Winnipeg, Calgary, Regina and Edmonton. Kirkland & Rose, Vancouver, B. C.

(REGISTERED)
TRADE CARSS MARK
MACKINAW.

Comfortable Clothing for Lumbermen

Carss Mackinaws Are Favorites in Canada

When a man goes swinging along dressed in Carss clothing, you may rest assured he is perfectly satisfied. He will be warm and comfortable no matter how the weather turns. Carss Mackinaws are really waterproof. Also Carss clothing is strong and serviceable, and gives greater wear, dollar for dollar, than any clothing you can buy. When you want to create good fellowship among your men arrrange to supply them with our clothing, and you'll be repaid tenfold.

Write us to-day for catalogue, samples and prices.

Carss Mackinaw Clothing Company, Limited

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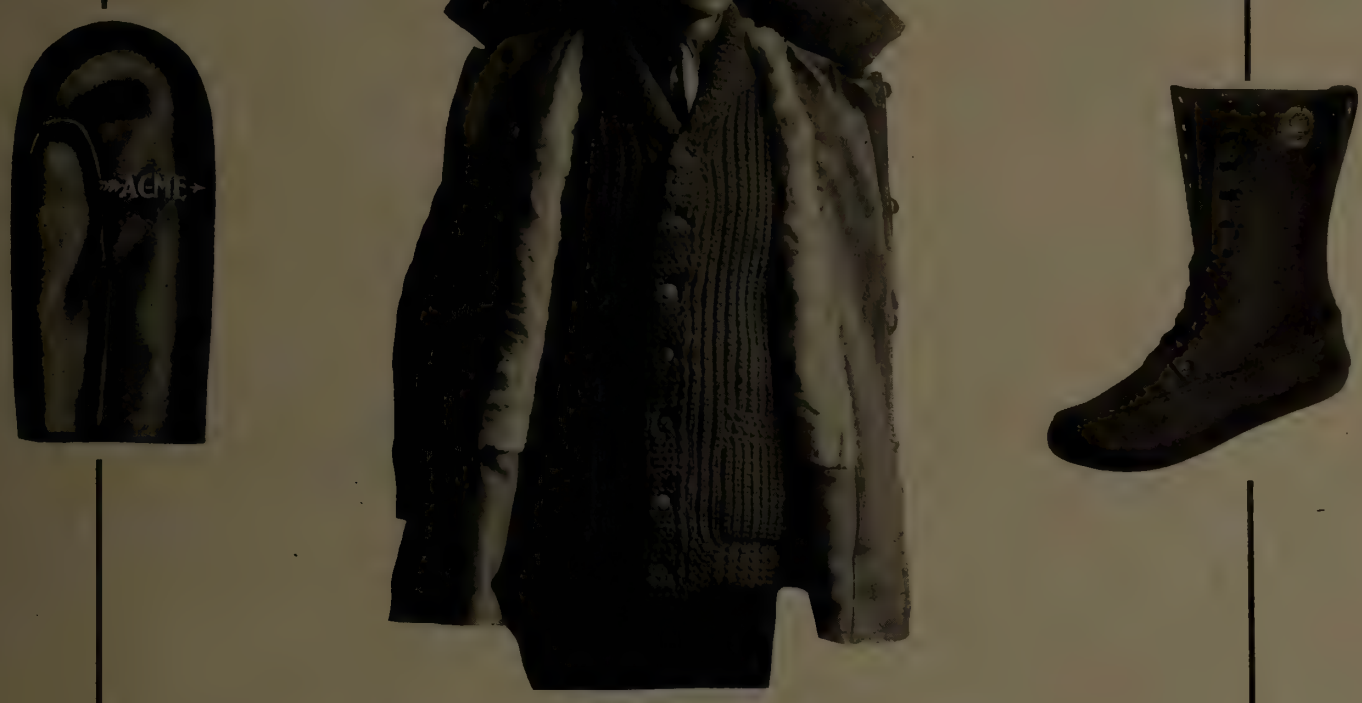
(REGISTERED)
TRADE CARSS MARK
MACKINAW.

ACME

Mitts, Gloves, Sweaters, Larrigans



Lumbermen's Socks Pants
Knee Breeches Moccasins
Mackinaw Coats Shirts

ACME

TRADE MARK

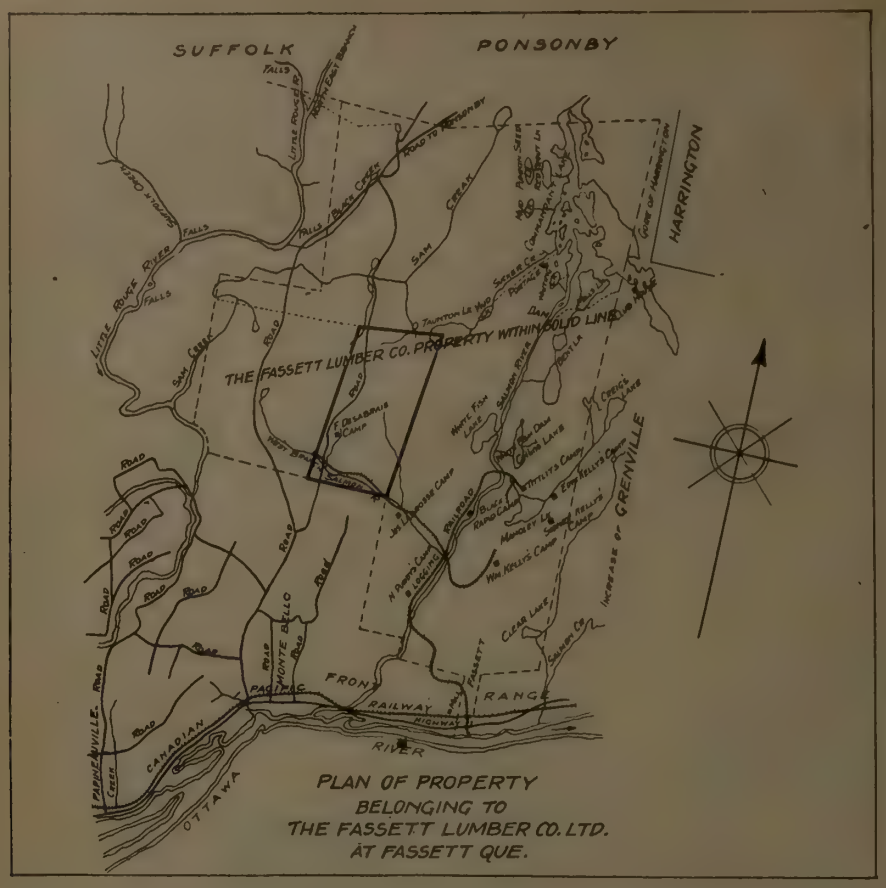
FROM THE RAW MATERIAL TO THE FINISHED ARTICLE

We operate our own Tanneries and Woolen Mills, and manufacture all the Goods we sell.

Write us for Samples.

ACME GLOVE WORKS, LIMITED

MONTREAL



mill, and also making the work less dependent upon the climatic conditions.

The Logging Operations

When a camp ground has been located and cleared, the tote-road is built. The operation always starts from the lower end, near the railroad, and works backward. Then the roads are blazed out, and the cruising starts. The cruiser follows the roads that are blazed out and estimates strips from each of these blazed roads, and in this way the whole area is estimated. The cruising is generally done by the contractor and the owner of the forest. They use no equipment and no rules, as the estimating is done by merely looking at the forest. The sun is used to control the direction, and the estimators walk from one mountain to the other. The time required for this walk varies, of course, with the different conditions, but the average on this tract is about two hours per acre. Since the cruising is done by the owner and the contractor themselves, the cost per acre is very small.

After the cruising is done, the price of camp and roads, and other expenses of the logging operation are estimated. If jobbing is done, the price of the contract is determined from this, the contract being taken by the thousand board feet, delivered to railroad.

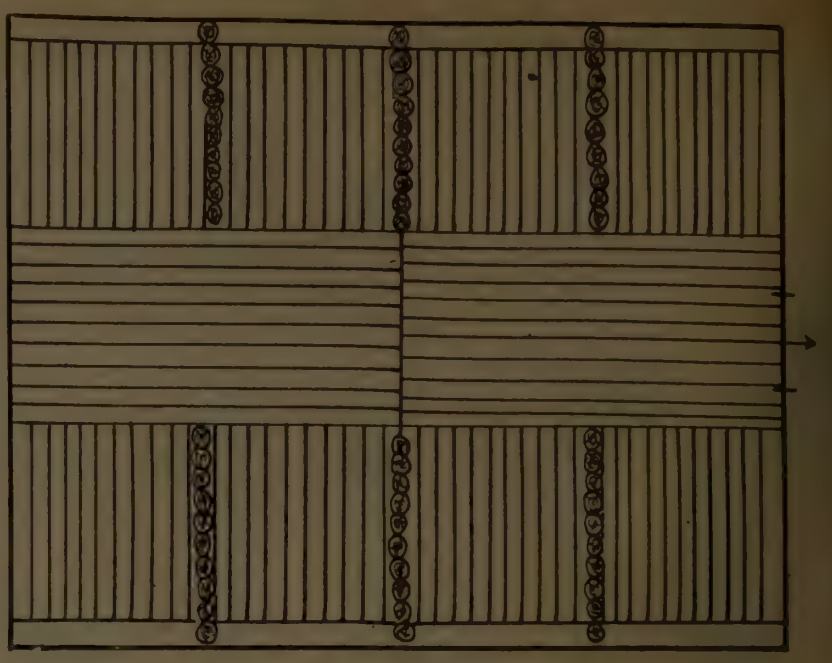
In all, 75 men were employed in this camp. They were mostly Frenchmen and Englishmen. The organization and wage-scale were as follows:—

	Monthly Wage
1 Contractor, in charge of work.	
1 "Straw Boss" (assistant foreman)	$65.00
1 Clerk (doing time-, store-, and book-keeping)	50.00
1 Main road-cutter ("buck-beaver")	40.00
10 Men for road-cutting	37.00
1 Filer (for 7 crews of log-makers)	50.00
2 Fellers	40.00
2 Skid-trail-cutters	35.00
1 Teamster	40.00
1 Roller	39.00
1 Blacksmith	65.00
1 Blacksmith's hand-man	40.00
1 Stable-boss	40.00
1 Cook	65.00
2 Chore boys	30.00
1 Toter	40.00
2 Tote-road repairers	35.00

The wages included board. They were higher this year than usual, being about 30 per cent. above normal before the war.

The Logging Camp

When a camp is located, many points have to be taken into consideration. The most important ones are the distance from the base of supplies, the accessibility of the camp, and the drainage away from the water supply. The camp which I visited was selected because there already was a camp built, which only required small repairs and enlarging. It was located on the tote-road, in the middle of the logging area, and had a creek with splendid water running through it. The camp was located on a slightly sloping place, and as the cookhouse was situated on the upper part of the slope, the drainage from the stables, etc., did not spoil the purity of the water. The distance to the railroad was about 1½ to 2 miles, and supplies were therefore easily brought to camp.



Plan of Stables

From this particular camp, about 3,000 acres, a yield of approximately five million board feet was expected to be logged.

An area of about three acres was cleared for the camp. The buildings consisted of:

Office, 16 x 20 feet—3 beds.
Cookery, 32 x 26 feet—3 beds and eating place for 75 men.
Sleeping camp, 40 x 26 feet—35 bunks for 70 men.
2 Stables, 32 x 26 and 26 x 24 feet—8 and 6 teams.
Blacksmith shop, 20 x 22 feet.
Granary, 25 x 20 feet.
Root house, 12 x 12 feet (inside).
Meat-house, 12 x 12 feet (inside).

For the building of the camp was required:

Office, 700 feet boards and 1,000 feet round timber.
Cookery, 2,000 feet boards and 1,000 feet round timber.
Sleeping camp, altogether 4,000 feet.
Stables, 900 feet and 800 feet.
Blacksmith's shop, 1,000 feet.
Granary, 1,200 feet.

For all buildings 200 pounds of nails were used; also 50 rolls of two-ply roofing paper. The office has four windows and one door; the cookery eight windows and two doors; the bunk-house six windows and one door; the other buildings have no windows and one door each. The size of the windows is 2 x 2 feet.

To build a camp with specifications as above, 25 men will be required for three weeks, and two teams. The tools necessary are: 6 canthooks, 20 axes, 6 shovels, 2 saws, 3 to 4 chains, 1 swivel, 1 evener, 4 hammers, 1 sledge, and 2 sets of harness. The cost of the whole buildings is estimated to be about $1,500.

The office, bunk-house, and blacksmith shop were heated by round stoves of the common type. In the cookery were two stoves, each 5 feet by 32 inches. The camp was also supplied with:

1 Baking box	7 Doz. teaspoons.
2 Frying pans (round, 12 in.)	7 Lamps for cookery
2 Frying pans (round, 6 in.)	1 Lantern for cookery
2 Frying pans (rect. 24 x 26 in.)	2 Barrels for water
1 Doz. Bread pans	2 Brooms
3 Mixing spoons	1 Duster for pans
3 Dippers	15 Yards net for table-cover
2 Water pails	2 Bean kettles (16 in.)
2 Washing dishes	3 Iron soup pots (10 and 6 gal.)
1 Washing tub	1 Tea kettle (6 gal.)
2 Doz. milk dishes	1 Tin water-boiler
12 Deep soup dishes	3 Large soup spoons
7 Doz. knives	2 Doz. pie plates
7 Doz. forks	2 Butcher knives
7 Doz. meat plates	1 Bread knife
7 Doz. tea dishes	6 Scrubbing brushes
1 Doz. syrup jars	3 Doz. towels
1 Doz. salt shakers	4 Lamps in sleeping camp
1 Doz. pepper shakers	2 Lamps in office
7 Doz. tablespoons	2 Lamps in blacksmith shop

As the camp had good connection with the village by the rail-

THE MOST OF THE BEST FOR THE LEAST

If it's a question of supplies it will pay you to consult us.

The question of feeding your men is always a considerable item, even under normal conditions ; but in these abnormal times it is exceedingly complex. Prices on almost every line used in the camps have advanced enormously, due, of course, to the war and the conditions which it has created.

While we, therefore, cannot quote you as favorably now as we could before the war started, we believe we can give you better prices commensurate with good quality, than any other supply house in Canada.

This is possible only because we do business on such a big scale, being the largest bakers' and confectioners' supply house in Canada, and because of our exceptional buying and manufacturing facilities.

We would like to show you how much it is to your advantage to get in touch with us and will gladly quote you on any of the following lines :

MINCE MEAT, JAMS and JELLIES, CHEESE, BUTTER, EGGS and EGG PRODUCTS, SYRUPS, FIGS, RAISINS, CURRANTS, CANNED FRUITS, POWDERED and CONDENSED MILK, BAKING POWDER, FLAVORING EXTRACTS, Etc.

Prompt and Satisfactory Service Assured

SEND YOUR ENQUIRIES TO

Bowes THE BOWES COMPANY LIMITED 72-74-76 FRONT ST. E., TORONTO FOOD SUPPLIES FOR THE CAMP Bowes

road, no commissary store was kept. The supply on hand was very small for the same reason. The men were well fed, and fresh meat was served at all meals. The cost per meal, per man, is about 12 to 13 cents.

The camp store is not very large, on account of the village being so near. The prices charged are either the same as in the stores of the village, or 5 per cent. more to cover tote-expenses. This 5 per cent., however, is mostly paid by the merchants, so the prices are generally the same as in Fassett.

The average value of stock on hand all the time is about $150 (for 75 men), and the stock consists of footwear, underwear, shirts, overalls, mackinaw coats and pants, socks, stockings, mits and gloves, towels, tobacco and chewing tobacco, pipes, patent medicines, fly-dope, jack-knives, shoe-laces, matches, and stationery.

The system of keeping accounts is the so-called single bookkeeping. The names and the amounts are put in the ledger, also the amount received. The balance is taken at the end of the month. A time-book is kept as ordinarily. The accounts are put in the ledger.

The Blacksmith Shop

The blacksmith makes all the sleighs used for hauling, and, of course, does all the necessary repairs. The supplies include hammers, augers, files, saws, braces and bits, chisels, bolts, spikes, nuts, rod iron, nails, etc.

The camp used 16 horses (8 teams) for the operation. The average weight of the horses was about 1,500 pounds, and they cost $200 each. They were fed three times daily, each time getting 1 gallon of oats and 10 pounds of hay per horse. The price for feeding should average about 25 cents per meal.

The epuipment of the stables is as follows:

1 set of harness		$70.00
1 set of blankets		5.00
1 water pail		0.30
1 lantern	per team	1.00
1 set of tongs		7.00
1 block and line		17.00
1 shovel		1.00
1 dung fork		1.00

Equipment for Transportation

All the skidding and hauling operations were done through the winter season. The equipment of the camp was:

1 wagon.
14 pairs of sleighs.
1 snow-plow.
1 sprinkler.
100 feet of chain per sleigh (4 corner-binds and "wrapper").
1 pair of tongs.
2 dogs. per team.
2 pulley-blocks.

Altogether the cost was estimated at $2,000.

The Fassett Lumber Company supplied all railroad equipment, which consists of:

3 Shay-geared Lima, Ohio, Locomotives, 55, 65 and 70 tons, average price	$12,000
1 Small switching (saddle-tank) engine, 25 tons	4,000
60 Logging cars	400
2 Bernhardt steam log-loaders	4,500

For inspection purposes a device was made of the use of an automobile on the rails, by flattening the tires, putting special sized flanged wheels over them, and then blowing the tires up firmly, the flanged wheels were held in place. This car proved to work splendidly.

The tote-roads are laid out from the farmers' clearing to the camp, located on the sides of the mountains and hills in order to avoid the mud.

The tote-road to camp was located in very hilly country, fairly steep grades occurring in a few places. To build one mile of tote-road it was estimated that 10 men were required for one week, using one team. This would cost about $205 to $210 per mile.

In the rainy season, when the roads were muddy, most of the repairs were done, and one or two men were employed for repair work during the entire season. The maintenance costs $600 per year.

The logging-roads are located in gulleys, and laid out to save grades as much as possible, steeper slopes than 5 per cent. being avoided where possible. These roads are built from brush and skids, and there are required five men during one week to cut one mile. No teams are necessary. This work costs $100 per mile, and about 35 miles of logging roads were necessary for this tract.

The railroad construction costs $6,000 per mile, this including grades, ties and steel, ballast and bridges, etc. The steepest grade tolerated is about 6.5 per cent., the average being 3 per cent. The railroad runs from Fassett in a northwesterly direction, following the Salmon River and one of its branches, for a distance of 28 miles (the switches not included). The topography of the country is very rough, thus causing considerable difficulties in the construction of the railroad.

Logging Practice

Seven crews were employed in felling and skidding. Each crew consisted of 6 men, namely: 2 fellers, 2 trail-cutters, 1 teamster and 1 roller.

Felling: Axes, saws and canthooks were used for felling purposes. The axes were double-bitted, with straight or bent handles made of hickory. They cost about $1.50 complete. Simonds cross-cut saws cost $5.00, and canthooks $1.50. Before felling, the tree was inspected for defects and crooks, and if it was found sound, the trail-cutter cleared around the tree and notched it, after which the fellers sawed it down, measured it into logs by the help of a wooden measuring stick 8 feet long, making the logs in sizes of even feet, usually 16 feet up to 20 feet, and then sawed it into logs. The trimming was done by the trail-cutters. No nosing or peeling was done.

Each crew could cut 80 logs per day, about 5,500 board feet. The cost of felling averaged last year $1.00 per thousand feet.

Skidding: When the logs are cut, the trail-cutter starts to make the trail, and skidding commences. A teamster with a team of two horses, assisted by a roller, forms the skidding crew.

The trails are cut very roughly, the worst obstructions being removed. The skidways are built alongside the hauling roads, landings located in a direction parallel to the roads and close up to them on the upper side, so that sleighs can easily be loaded.

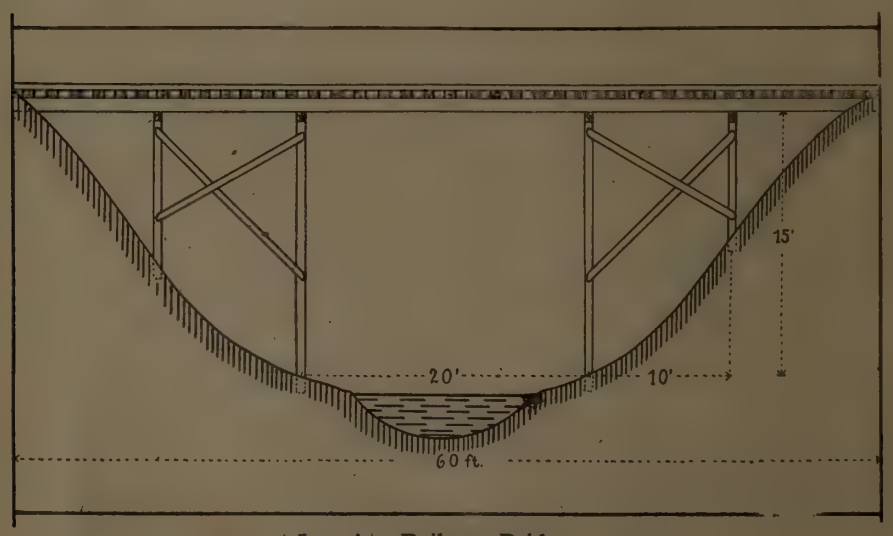
In order to pull the logs up on the skidway, a head-block and two long skids 5 feet apart are used. Usually there are 40 logs to a skidway. Hardwoods, softwoods and hemlocks are kept in separate skidways.

Skidding trails were of different lengths, from 10 feet up to 500 feet. They were very difficult to locate, as the topography in many places was unusually rough, and most of them were of such character that it was entirely impossible to use sleighs. The logs remain on the skidways anywhere from a couple of hours to a few months.

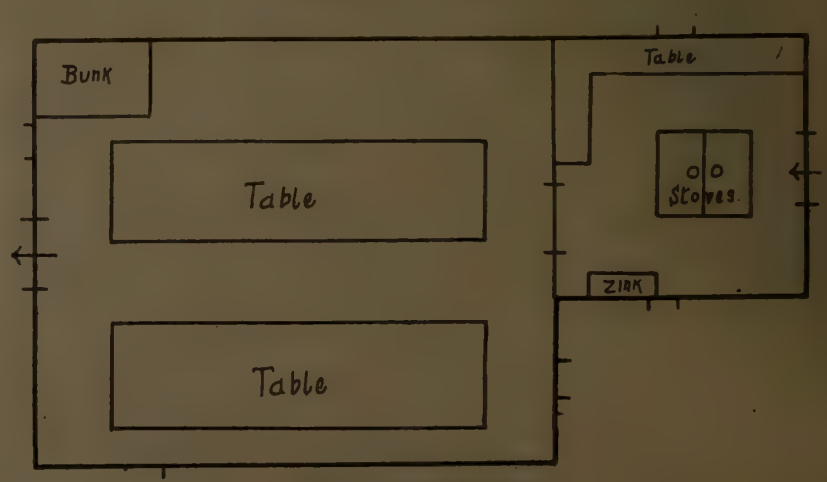
In the skidding operation tongs and chains were used, and for pulling the logs up on the skidway, block and line. A crew can handle about 80 logs per day, about 5,500 board feet, and the cost will be about $2.00 per thousand feet.

Hauling and Transportation: Hauling starts as soon as the snow

(Continued on page 146.)



Logging Railway Bridge



Plan of Cook House

CAMP SUPPLIES

We want you to know that we are in the Camp Supply business as far as Groceries are concerned, and we are in it good and strong. This is a branch of our business that we have specialized in for thirty years back, and consequently we do think that we know something of the wants of the Camp. There are very frequently lines of goods which are equally suitable for use, and at a wide difference in price. Now there's no use throwing good money away, particularly in these times of scarce commodities and consequent high prices. We would like to talk this matter over with any who are not now favoring us with business, and can do this either in person or by mail. We feel confident that we can make a conversation mutually advantageous, and there could be no more appropriate time to do it than NOW.

We always have on hand some attractive lines that are suited to your needs, and at present we here enumerate a few, and if you find on looking the list over that you are interested, why, just drop us a line and we'll get after you.

Santa Clara Prunes, small size but extra good quality, in 50's -	9½
1 Crown Seedless Muscatel Raisins, 50's - -	9½
Choice Seeded Raisins, 16 oz.	9¾
California Sultana Raisins, 50's	10½
Spanish Valencias, 28's -	7½
Siam Rice, good cooker, 100's	7⅛
Japan Rice, " " 100's	7⅜
Camp Blend Black Tea -	26
" " Mixed " -	24
" " Green " -	19
Japan Tea, good drinker -	17½
" Fannings, good drinker	14½

These Camp Blend Teas which we put out are models of their class. Every care is taken to ensure that the value for the price is there every time. If you will only take some of these on, we feel sure that you will repeat on them, for they are such good quality for such a low figure.

H. P. ECKARDT & CO.

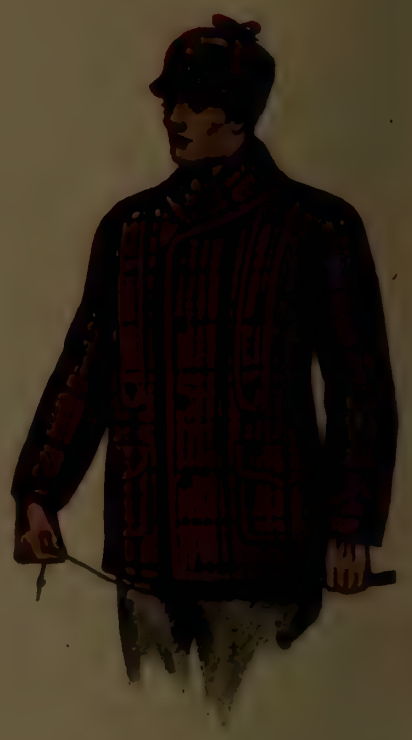
Wholesale Grocers

Church Street and Esplanade - TORONTO, ONT.

Lumbermen, Railroad Contractors and Miners

We are Head to Foot Specialists for all kinds of Clothing, Mackinaws, Ettoffs and Untearable Wool Tweeds.

The celebrated "G-H-G" All-wool Clothing is superior to all other makes. First, because the cloths used lead in quality; Secondly, because all garments are designed to give them a smart, natty appearance, and thirdly, because they are properly tailored. Camp store keepers tell us that "G-H-G" garments sell almost on sight for as soon as a man puts a garment on he makes up his mind. Samples or sample orders sent for the asking.



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Grant - Holden - Graham

Manufacturing Wholesalers and Importers Limited

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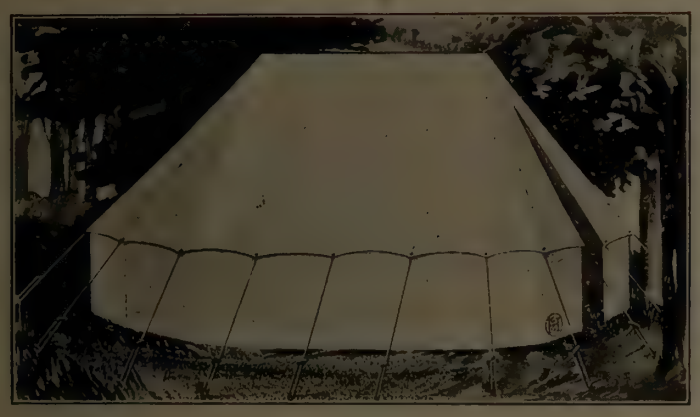
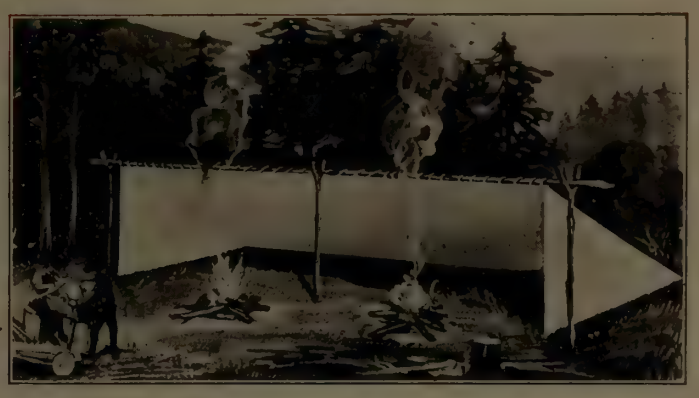
We Are Builders of Canvas Homes to both the Canadian and American Armies





REPELLANT Brand Duck is the best known and most called for duck sold on the continent to-day. Repellant Brand Duck has passed the rigid tests of both the Canadian and United States Army Departments. The result is that now our factory is at present full to capacity with orders for the outfitting of the American Army for Overseas.

Repellant Brand Duck is made up into Tents, Awnings, Horse Covers, Tarpaulins, and every thing that can be made out of canvas. We will be glad to send you samples of Repellant Brand Duck and quotations upon shortest notice.

Horse Covers, Tarpaulins, Wagon Covers, etc.

Duck Tents
of Double and Twisted Yarns. Guaranteed free from sizing.

Watertight Duck Tents
Absolutely weather and mildew proof.

Featherweight Silk Tents
All Styles, Easy to Pack, Light and Durable.

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Manufacturing Wholesalers and Importers Limited

Ottawa 147-151 Albert Street **Canada**

comes, which usually occurs in the beginning of January, and continues to the beginning of April. The roads are then sprinkled, in order to get a good hard surface. Three men are employed for road repairing, and one man to shovel snow.

A crew for loading consists of 2 senders, 1 top loader, and 1 tailer, who rolls the logs to the senders. The senders and the top loader are paid $40 per month, while the others receive $35.

The sleighs used were of the ordinary construction, the so-called "bob sleigh." The bunks were 7½ feet long, and equipped with 4 corner binds and one wrapper per sleigh. Twenty-five logs was considered a good load. The length of the hauls varied, of course, very much, the longest distance being about four miles, and the average two miles. Prices for hauling would run about:

1 mile, $1.00 per thousand feet.
2 miles, $1.25 per thousand feet.
3 miles, $1.50 per thousand feet (4 trips daily).
4 miles, $1.75 per thousand feet (3 trips daily).
5 miles, $2.00 per thousand feet (2 trips daily).

The logs are hauled to the railroad, where brush and other obstacles are cleared around the log piles, so that the loading can go on easily. The logs are put as close to the railway track as possible without interfering with the operation of the railroad, and must not be farther away than 75 feet. These piles are always located on the lower side of the track, and the logs are emptied into the piles without putting the logs in any order.

For loading the logs on cars, steam log-loaders are used. A steel wire is used for lifting the logs, which are held fast by the help of a tong with a ring. The cars are loaded higher up on both sides, and chains are tied around. A few are then placed on top of the chains, thus forcing these down in the open space in the middle of the car, and in that way the chains are made tight. The loaders can each handle 65,000 feet per day.

From the woods the logs are brought to the mill by the railroad. In winter the logs, when brought to the mill, are emptied into the "hot pond" in order to be thawed out before they are sawn. The hot pond, which is heated during the winter by means of exhaust steam from the plant, is 400 by 150 feet.

Logs are hauled every day, and in this way the company only hauls what is needed for the daily cut at the mill, thus saving storage place, and also being enabled to handle orders more quickly than usual.

Scaling: The teamsters keep tally of how many logs are hauled, and the sub-contractor's stamp is placed on the logs. The logs are scaled at the mill, by two government scalers, one being employed by the lumber company, and the other by the contractor. The Quebec Rule is used, the log being measured at the mill end. This is done when the log is taken into the mill to be sawn. For this work caliper and tally sheets are used. In case of defects, which, however, very seldom occur, the diameter is generally deducted about one inch. The cost of scaling was estimated to be 10 cents per thousand feet. The scalers were paid $75 per month.

	Per M. Feet
Making of logs cost	$1.00
Skidding	2.00
Trail cutting	0.50
Main road cutting	0.50
Hauling	1.50
Buildings	0.25
Total expenses ... delivered to the railroad	$5.75

After the tract has been cut for lumber, all standing trees are removed by the Standard Chemical Company, to be used in their factory in Fassett.

Gasoline Tractors for Winter Logging

Good results secured by River Ouelle Company—Train loads of log sleighs drawn direct to mill—Operating and construction details

The problems connected with the taking out of logs in the province of Quebec during the winter time, though similar in most respects to the problems in other parts of eastern Canada, are sometimes handled in a slightly different manner. An interesting example of this is to be found in connection with the operations carried on by the River Ouelle Pulp and Lumber Company at St. Pacome, P.Q. The accompanying illustrations give a good idea of a method which they have recently adopted for obtaining logs for their winter mills. The logs are yarded by the men in the bush, very much according to the usual manner in connection with other operations. Then they are hauled by gasoline tractor direct to the mill. This enables the company to keep its mill operating about ten months in the year. After operating this tractor for two years the River Ouelle Pulp and Lumber Company have come to the conclusion that the only satisfactory manner in which to utilize tractors of this type will be to have a spare machine, operating one machine night and day, and keeping the other as a spare in case of breakage or in case anything should get out of order. This is the plan they intend to adopt from now on if they are able to obtain a second tractor in time for their next winter's operations. Of course, it is essential under such circumstances that the two machines should be exactly similar, so that the parts may be interchangeable, otherwise one might not be much the gainer by having a second machine.

The use of a gasoline tractor makes it important, in fact necessary, to obtain specially skilled labor. The tractor requires good supervision and capable men to fill the positions of chauffeur and mechanics. In addition, it is necessary to erect a regular garage and heat it, also to have it well lighted so that the work may be done at any time, day or night.

It is not feasible in a published description to explain all the workings of such a tractor, such as the handling of the sleighs, etc. The general principles are fairly well understood by those who have had any acquaintance with other types of log haulers, but a knowledge of the etails can only be obtained by actual operations, or by inspecting an operation during progress.

The number of men employed in loading will depend to a great extent upon the length of the road, and the number of sleighs handled per day. The River Ouelle Pulp and Lumber Company consider at

Logs Piled Ready for the Tractor

Sleigh Load for the Tractor's Train

Let us supply your Camp Provisions

WE make a special feature of supplying Provisions to Lumber Camps. We know just what you want—how to pack it and how to ship it, so that it reaches you in good condition. And our Prices are the lowest we dare quote for strictly high-class goods. Try us for—

Long Clear Bacon

Barreled Beef | Barreled Pork

Pure Lard, "Peerless" Shortening (the very thing for camp cooking), Smoked and Cured Meats and "Peerless" Pickles—"The Pickles that Tickle the Taste."

We are now in the Beef Business

—and are in a position to supply you with **FRESH** or **FROZEN BEEF** of the choicest quality at lowest market prices. Carefully packed and shipped. Get our Prices—to-day.

Write or wire us (at our expense) for Quotations

THE WILLIAM DAVIES COMPANY LIMITED

TORONTO

Montreal Winnipeg

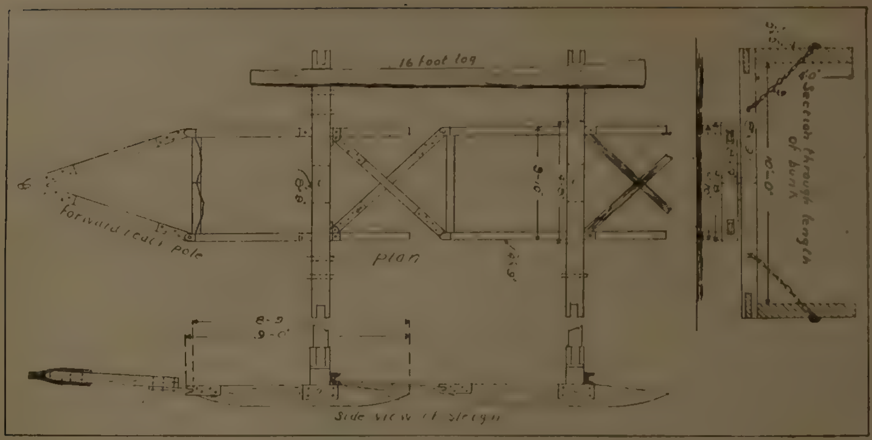


Diagram of Sleigh Drawn by Gasoline Tractor

present that it would not be advisable to operate these machines on a shorter road than about five miles.

Working Account for the Tractor

The River Ouelle Pulp and Lumber Company have kindly furnished us with a copy of their 1916 working account and other important data regarding the operation of this tractor. The cost of operating during the winter of 1916 was as follows:—

Working Account		Per M. Ft.
Chauffeur, gasoline, lubrication, superintendence, etc.	$2,260.92	$1.0833
Loading sleighs at rollways	1,850.58	.8869
Unloading sleighs at mill	1,206.85	.5782
Upkeep of road	1,259.00	.6033
Cost of making rollways	113.61	.0544
Cost per M. ft. mile .557	$6,690.96	$3.2061
Repairs		
On machine	$1,662.86	.7967
On sleighs	$ 455.38	.2182
	$2,118.24	$1.0149

Details of the quantity and cost of gasoline and oil used during the year were as follows:—

Total	
4,319 gals gasoline	$1,062.76
351¼ gals. Polarine	191.35
41 gals. Ren. Engin.	14.35
410 lbs. grease	35.50
85 lbs. white lead	8.95
	$1,312.91
Per M. Ft.	
2.07 gal. gasoline	$0.5092
0.17 gal. Polarine	.0927
0.02 gal. Ren. Engin.	.0070
0.20 lbs. grease	.0173
0.04 lbs. white lead	.0042
	.6304
Per M. Mile	
1.28 gal. gasoline	.3149
0.10½ gal. Polarine	.0572
0.01¼ gal. Ren. Engin.	.0044
0.12 lbs. grease	.0104
0.02½ lbs. white lead	.0026
	.3895

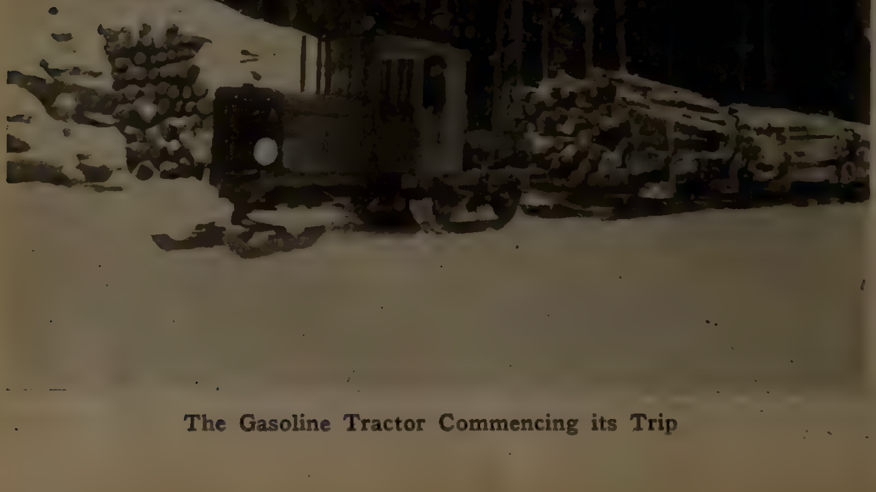
The company started operations on December 22, 1916, and finished on March 31, 1917. The operating details of the season's work were as follows:—

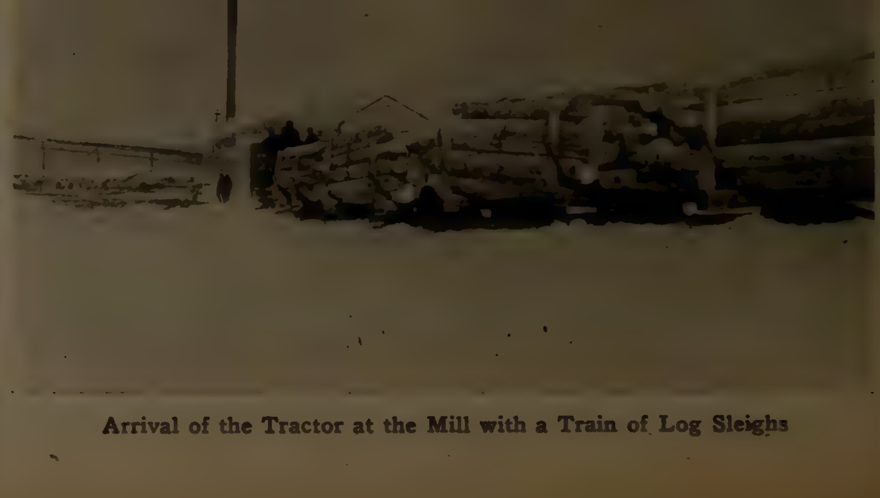
Number of days operating	69
" days lost	15
" trips made	293
" miles run	3,372
" sleighs hauled	1,139
" logs hauled	71,317
" feet L. M.	2,086,984
" miles per day	48.87
" trips per day	4.00
" sleighs per day	16.50
" logs per day	1,033.60
" feet L. M. per day	30,245.62
" miles per round trip	11.51
" sleighs per round trip	4.00
" logs per trip	243.40
" feet L. M. per trip	7,122.68
" logs per sleigh	62.61
" feet per sleigh	1,833.00
" feet per log	29.26

Materials Needed for Twenty Logging Sleighs

Following are the specifications of material required for the construction of twenty logging sleighs:—

40 steel castings, couplings for runners, right.
40 steel castings, couplings for runners, left.
80 steel castings, couplings on rockers.
80 steel castings, rocker plates.
40 bunk pins, 16 in. x 1½ in. (round steel).
80 rocker-plate pins, 9½ in. x 1¼ in. with ⅜ in. cutter pins.
80 roller gudgeons, 10 in. x 1¼ in. - ⅝ in., hole bored in each.
80 reach-pole plates, 23 in. x 3 in. x ⅝ in., bolt holes drilled.
160 side plates, for runners, 24 in. x 6 in. x 7/16 in., holes drilled.
80 top plates for runners, 18 in. x 4 in. x ¼ in.
40 bunk plates, 18 in. x 10 in. x ¼ in.
40 rocker plates, 18 in. x 10 in. x ¼ in.
80 sleigh shoes, 8 ft. 10 in. x 4 in. x ½ in.
80 sleigh shoes, 8 ft. 10 in. x 2 in. x ½ in.
85 sleigh bolts, c.s. head, 5 in. x ⅝ in.
85 sleigh bolts, c.s. head, 8 in. x ⅝ in.
165 sleigh bolts, c.s. head, 10½ in. x ⅝ in.
85 sleigh bolts, c.s. head, 10 in. x ⅝ in.
85 sleigh bolts, c.s. head, 6 in. x ⅝ in.
1,200 machine bolts, 5½ in. x ⅝ in.
350 machine bolts, 8½ in. x ⅝ in.
500 machine bolts, 4½ in. x ⅝ in.
250 machine bolts, 4 in. x ⅝ in.
200 machine bolts, 11 in. x ⅝ in.
200 machine bolts, 8 in. x ½ in., c. s. head.
100 lbs. ⅝ in. washers.
50 lbs. ½ in. washers.
12 bars 1 in. round iron.
5/16 in. chain 7/6 in. chain.
80 straps for end of bunk ⅜ in. x 2½ in. run.
80 plates for end of stakes made of saw steel.
80 couplings atached with 5/16 in. chain to roller.
80 couplings—pins attached to rocker.
40 eye-bolts to hold chain to roller.
80 ferrules for end of roller.
80 staples to hold chain to stakes.
320 staples to fasten chain to bunks.
80 staples to hold coupling pin to bunk.
80 lock pins, for trip.
80 ferrules for trip poles.
3 forward coupling plates.
3 forward coupling pins 1¼ in. x 8 in.
40 staples for trip.
80 sleigh runners 8 ft. 9 in. x 4 in. x 9 in., birch.
40 rockers 4 ft. 8 in. x 8 in. x 9 in.
40 bunks, 11 ft. x 8 in. x 9 in.
80 reach poles, 5 ft. 9 in. x 3½ in. diameter, birch.
40 rollers, 4 ft. 2 in. x 4 in. diameter, birch.
80 stakes, 5 ft. x 6 in. diameter, birch.
40 trip poles, 8 ft. x 2 in. diameter.


The Gasoline Tractor Commencing its Trip


Arrival of the Tractor at the Mill with a Train of Log Sleighs

THE HARRIS ABATTOIR COMPANY, LIMITED
TORONTO, ONT.

Mr. Lumberman:

When you are next purchasing supplies of any of the products mentioned below, we would appreciate your enquiry so that we may quote prices.

We know that we can give you satisfaction, as regards "prices," "quality of goods" and "service."

With reference to "service," we are prepared to give delivery weekly by refrigerator cars to practically every section of Ontario, Quebec, and the Maritime Provinces. It will pay you to get in touch with us before placing your order.

Long Clear Bacon,	Domestic Shortening,
Barrelled Pork,	Pure Lard,
Barrelled Beef,	Cured Meats,
Butter,	Eggs,
Cheese,	Sausages,
Mincemeat,	Vegetables,
FRESH MEATS,	LIVE STOCK.

Agencies at:—

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Haileybury, Ont.	Hamilton, Ont.	Halifax, N.S.
Windsor, Ont.	Montreal, Que.	New Glasgow, N.S.
Chatham, Ont.	Quebec, Que.	Sydney, N.S.
St.Catherines, Ont.		

THE HARRIS ABATTOIR COMPANY, LIMITED

Is Your Work Going With Vim Or Is It Just Dragging Along?

"Sit down, Thompson. How's the work going?"

"It isn't going—its ***dragging.***"

"What's the matter—men sore?"

"No! There's no complaint. Grub is good. Men seem willing enough—but they don't put their heart into the work."

"Say, Thompson, why don't you get real beds for the men, ***like the one I'm sitting on?***"

"Holy mackerel! I ain't running a Ritz-Carlton Hotel at my camp."

"I don't mean brass beds and Ostermoor mattresses; I mean vermin-proof steel bunks ***with real springs,*** upon which your men can relax comfortably after a hard day's work. They will be money in your pocket."

"You mean money ***out*** of my pocket."

"No, sir. The trouble with your men is lack of rest. They don't get a good night's rest on those hard, wooden bunks of yours that can't possibly be kept free from vermin; they can't do a day's work. Those old bunks are costing you a pile of money, because they are keeping the men from doing their best work."

"Tell you what, Thompson. Rip out the old wooden shelves that your men are trying to sleep on—put in ***'Alaska' Sanitary Steel Bunks***—and you'll find that your men will turn out about 25% more work. I proved it myself, and so did Miller." (***So have many others.***)

'Alaska' Sanitary Steel Bunks Cost More, But are the Cheapest in the End.
***Now* is the Time to Equip *Your* Camp with Them. May We Quote You?**

The Parkhill Manufacturing Co., Limited

MONTREAL — WINNIPEG
GUARANTEED ALASKA BEDDING
TRADE MARK REGISTERED

Successors to
THE ALASKA FEATHER & DOWN CO., LIMITED
Makers of Steel Bunks, Bedsteads and Bedding
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"'ALASKA' on an article means HIGH-GRADE EVERY PARTICLE"

YOUR FALL PROVISION ORDER

LET GUNNS TAKE CARE OF IT

EVERY MEAT FOOD REQUIREMENT FOR ANY CAMP

BARRELLED PORK
BARRELLED BEEF
FROZEN BEEF
SMOKED MEATS
SWEET PICKLED MEATS
DRY SALTED MEATS
SAUSAGE
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QUALITY PRODUCTS CAREFULLY CURED PROPERLY PACKED

BUTTER
EGGS
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MINCEMEAT
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EASIFIRST SHORTENING

FOR ALL CAMP COOKING AND FRYING.
COSTS MUCH LESS THAN LARD, GIVES BETTER RESULTS.

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What Will You Have, Sir?

Harness? Collars? Sweat Pads? Waterproof Moccasins or Shoepacks? Leggings? Country Boots? Harness and Shoe Leathers? Lace Leather in Sides or Cut Laces? Saddlery Hardware? Shoe Makers' Supplies?

We have the most up-to-date factory and stock in Canada—You will do well to secure at least our quotations before you buy.

We put our goods up right and give special attention to quality—Write us early or have our traveller call. Remember the address!

BEAL BROS., LTD., - TORONTO, ONT.

Office, Factory and Warehouse: 52 Wellington Street East

Changes in Camp Supply Prices

Market Review Prepared for Canadian Northern Loggers Explains Prevailing Situation in Most Lines

A market bulletin for their logging contractors is issued periodically by the Eastern Lands Branch of the Canadian Northern Railway, under the direction of Mr. C. T. Young. The latest bulletin available, under date of July 7, contains detailed references to market conditions regarding many lines of camp supplies, and is, in part, as follows:

Horses.—The horse market has been decidedly firmer than that of three months ago, and the purchase by the American Government of army horses across the line, together with the fact that horses for army purposes are again being purchased here, will stiffen the market further, with consequent higher prices. Logging horses are costing $25 to $40 more this year than last. Rejects from the British Government buyers' inspection have been selling at $135 to $170. Heavy draft horses, 5 to 8 years old, sound, 1,450 and up, are averaging $200.

Hay is selling in carload lots in Toronto at $12.50 to $13.50 for extra No. 2, and is about the same price throughout Northern Ontario. While this year's hay crop can hardly be expected to be as good as last year's, yet in Southern and Eastern Ontario, and part of the States, the hay crop seems likely to be good.

Flour.—The recent drop in the price of flour was in sympathy with wheat, due to the fact that there is scarcely any doubt that American Food Controller Hoover is taking steps for the government practically to take charge of the wheat and flour situation in its entirety. As Canadian Food Controller Hanna is working very closely with Hoover, the same thing will yet be reached here, and the market will unquestionably sag lower on flour.

Oats.—The only offerings in any quantity are Western, and oats are developing strength, due to war purchases, and in sympathy with corn on the Chicago market. It is good policy to buy no more than will carry you over until this season's crop is threshed. At our company camp we are going to feed corn mixed with oats this winter. Not only will it be cheaper, but there are more heat units in corn, which is an advantage under cold logging conditions.

Rolled Oats.—A strange thing has happened in the rolled oats market, for, while the price of packages have advanced to $4.75 per case, the price of bulk eighties has dropped to $3.50. This latter price may be expected to rise again strongly, as this cannot be anything else but a sag in the market.

Bran.—There is a light demand for mill feeds of the bran variety, the general quotation being $32. If the season continues wet and the good pastures now prevalent do not dry up. the demand will still be light.

Beef.—At the Union Stock Yards, Toronto, although there was a liberal supply, trading has been active at prices 25c to 50c higher than those of two weeks ago. Stall-fed cattle are almost all marketed. The highest price noticed lately for a straight carload of steers was $12.50 per hundred.

Hogs.—Hogs are strong. Mess pork, 200 pounds, is quoted in Toronto at $46 to $48; short cut backs at $48.50 to $50; pickled rolls at $48 to $49. The latter is much the better buy for this season of year.

Lard.—Lard always slackens off in July and August. List prices in most cases were 26½c, tierce basis, yet quotations were made at 25½c. Compound lard is quoted at 22¼c, and quotations have reached as low as 21¾c.

I recently brought to the attention of Food Controller Hanna the fact that we ourselves, and Northern Ontario in general, especially lumber camps, were coming down into the Southern market bidding and taking out meats by the carload at a time when we were supposed at least to be in a famine crisis, while at the same time our Northern woods were full of moose and other game and our large lakes, such as Nipissing and Nipigon, were teeming with fish. I stated that if ever there was a time that game preserves were intended for surely it was now, because if the game did take 25 years to recover from depreciation, it was nothing as compared to human life now being sacrificed, from which the world would not recover for 100 years. Mr. Hanna has thanked me for calling this so forcibly to his attention, saying that it will certainly receive full and due consideration.

Potatoes.—New potatoes in carload lots are not costing any more at Toronto at present than old potatoes, as they are now selling at $8.25 per barrel, which represents a decline of $3.25 to $3.50 per barrel. Food control will put the potato market in a much more favorable condition yet, and this, of course, will be materially assisted by the coming crop, which, to date, looks good.

Beans.—Imported beans have not at all filled the want for Canadian hand-picked beans. The small amount of these that were left after seeding seem to be holding out exceptionally well, and much better than expected, and are quoted in Montreal at $10.50 to $12 per bushel. The three-pound pickers are lower, at $9.50 to $10.50, while the five-pound are selling at $7.90 to $8.50 wholesale.

Sugar.—Sugar is likely to go up again for at least sixty days, due to Canadian canning factories and the demand from housewives throughout the country. This advance may be substantial.

Tea.—The tea situation is not getting any better, and is likely to get worse. Aside altogether from the question of supply in the Far East is the fact that boats make three and four trips to one between New York and the Continent, and there is difficulty in obtaining sufficient seaworthy tonnage boats for any trade from the Far East and Australia. Freight on tea has advanced from 5c to 6c a pound during the past ten days. The United States Government is likely to ask Japan for transport ships to carry troops during the next year, and this is going to put Japan and China tea in worse shape even than India and Ceylon tea. Try to use all the coffee possible. This is often possible for camp breakfast. The grade of coffee obtainable is going to be higher, because chickery is almost entirely out of the market. Bogota and Jamaica coffee are quoted wholesale at 27c to 30c.

Canned Goods.—There is a serious shortage of efficient help in the Niagara district, and the total output is likely to be more or less seriously affected. Quotations cannot yet be obtained on the class of canned goods we use in camp as far as the new crop is concerned. The following prices on canned goods are general quotations from wholesaler to retailer, and are not f.o.b. factory prices: Beets, 3's, $1.50 to $1.90; tomatoes, 2½'s, $2.35 to $2.50; peas, standard, $1.45 to $1.50; corn, 2's, $2.10 to $2.25; pumpkins, 2½'s, $1.95 to $2.10; apples, gallons, dozen, $4.

Molasses.—There has been a falling off in the demand for molasses and syrups of all kinds, due to their place being taken by other products during the growing season. Corn syrups, barrel, per pound, are selling at 6½ cents; maple syrup, $1.25 per gallon. We have been using the latter steadily for the last ninety days, and find that it pays, because it is taking the place of other foods which have gone higher.

Rice.—The easier tendency which the rice market has had recently has changed, and rice has advanced from $7.50 to $8 per hundred wholesale. Reports from the South are not encouraging. Little tapioca is being shipped from the Far East, and stocks are low. This is going higher, and is quoted around 13c, with sago at 12c.

Dried Fruits.—The new prune crop is reported as very heavy in California. Locally the market for dried fruit is quiet, in view of the appearance of fresh fruits on the Southern markets. Prunes are quoted, 30's to 40's, 25's faced, at 16c, and 90's to 100's per pound, 25's faced, at 10½c, the latter being sufficiently good for camp use. Evaporated apples are 14c to 14½c; apricots, choice 25's faced, 24c to 26c; figs, taps, per pound, 5½c to 6c.

Raisins.—Valencia (California) are quoted at 10½c to 11c, and Valencia (Spanish) at 10c to 12c wholesale.

Salt.—Salt has advanced 60c per barrel, the 103 barrel being quoted at $4.30. Bulk salt, ordinary fine, in 280 pound barrel, is quoted at $2.15, the coarse at $2.40, and the ordinary fine in 50-pound bags, at 45c. Each of these has, therefore, had an increase of 25c.

Gordon River Timber Company's Holdings

A large crew of timber cruisers, under the direction, and in the employ of James D. Lacey & Company, of Chicago, Seattle, and New York, the well-known timber land factors, are now engaged in making a detailed cruise of the timber limits recently acquired by the Gordon River Timber Company, of Maine. This tract consists of sixty-five perpetual surveyed timber licenses, aggregating upwards of 41,361.2 acres. The tract is located on Gordon River and its various tributaries in Renfrew District, Vancouver Island, British Columbia. More than 65 per cent. of the timber stands on the Gordon River drainage and the remainder on Harris and Caycoose rivers. It is said that the topography of the area is favorable to economic railroad building and logging. The engineers employed by James D. Lacey & Company report that the timber can be logged either by rail down the Gordon River to the San Juan Harbor, or to Cowichan Lake, or down the Caycoose River to the Pacific Great Eastern Railroad.

The Gordon River Timber Company was organized for the purpose of acquiring this block of timber from McClure-Atwood Company and McClure Timber & Logging Company, of Stillwater, Minnesota. The officers of the Gordon River Timber Company are: James D. Lacey, president; Victor Thrane, vice-president and treasurer; J. W. McCurdy, secretary. The directors are: James D. Lacey, Wood Beal, and Victor Thrane, members of the firm of James D. Lacey & Company; Edward E. Barthell, of Chicago; Thomas H. Hume, of Muskegon, Michigan; E. E. Moberly, of New York City, and F. L. Peck, of Scranton, Pennsylvania. The capital stock of the company is $400,000.

The company represents that the quality of the fir and cedar on this tract tributary to the Gordon River, compares most favorably with

Camp Supplies

BEEF, LARD, PORK
COMPOUND LARD
BUTTER, EGGS,
CHEESE, ETC.

Our facilities are unequalled and we are so located that we can give quick service at minimum freights.

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Winnipeg, Man.

some of the most famous fir and cedar belts of British Columbia. It is the intention of the company to carry this timber until market conditions warrant manufacturing.

James W. Sewall Office Busy

The James W. Sewall office, timber explorers and surveyors, Old Town, Maine, report the following work going on: Kenneth McR. Clark with two assistant cruisers, and other labor, is in the Upper St. John region of Maine, exploring 50,000 acres; R. L. Whitney, with three assistant cruisers and laborers, is exploring 100,000 acres on the lower St. John watershed; Wentworth Peckham, with two men, is cruising 10,000 acres in the divide between the head of the St. John River and Penobscot waters; W. F. Billings, with an assistant cruiser and several men, is cruising 45,000 acres on the lower Allegash watershed; C. E. Cobb with an assistant and labor is exploring 75,000 acres on the upper Allegash; A. J. Preble with two assistant cruisers and labor is exploring 85,000 acres in Aroostook River watershed; O. W. Madden with an assistant cruiser and help is exploring 100,000 acres in the Red and Fish River watersheds; James A. Conners is exploring 18,000 acres in Nova Scotia; Francis Dougherty about 20,000 acres in New Brunswick, and A. C. McPheters is making a rough reconnaissance of some 300,000 acres in western Ontario.

The Sewall office has about 50 men out and states that business is rushing, as far ahead as can be seen. Pulpwood is being looked after much more than saw timber at present.

R. A. Long and Associates Purchase Large Yellow Pine Operation

R. A. Long and associates have purchased approximately 550,000,000 feet of long leaf yellow pine, mill, railroad, etc., from the Mississippi Lumber Company and the Estate of Jacob Haynes. The mill is located at Quitman, Mississippi, and the timber lies tributary to the plant in Wayne, Clark, and Lauderdale Counties, Mississippi. While the consideration has not been given out for publication, it is understood that it involves in the neighborhood of $3,000,000. The negotiations and sale were conducted through the firm of James D. Lacey & Company, timber land factors, of Chicago. While the Long-Bell Lumber Company has purchased a number of large yellow pine operations in the past decade, this purchase will be of special interest to lumbermen as it is the first time the Long-Bell Company has become interested to any extent in manufacturing yellow pine east of the Mississippi River.

The Field Lumber Company's New Plant

The Field Lumber Company, Limited, Field, Ont., who are widely known as manufacturers of white pine lumber, spruce, lath and shingles as well as cedar poles and piles, built a new mill last winter in order to double the capacity of their old mill which had become too small to handle their cut. In connection with the new mill they have installed two boilers 60 in. x 16 ft., with Dutch ovens, and are using sawdust for fuel. This is giving them very satisfactory results and they have plenty of steam to operate the mill. The engine is 18 x 24 and furnishes ample power for the plant. The equipment includes a steam feed carriage, steam loader, steam nigger, one circular saw, a Rogers gang edger, and a lath mill.

The mill is now turning out 40,000 feet and from 20,000 to 25,000 lath per ten-hour day, but the company expect, when the mill has been in operation a little longer, to be able to increase this output by about 10 per cent. As all the refuse of the mill is needed at present in order to even off the yard, the company have not yet installed a burner, but intend to do so soon.

The company report that their cut this year will probably be about 3,000,000 feet. They would have liked to turn out about 50 per cent. more than this, but were not able to do so, as they could not obtain a sufficient number of men during their woods operations last winter. Next winter, they intend, if possible, to take out about 6,000,000 feet. Their mill can handle this amount easily, working only in the day time.

The company's yard is along side of the main line of the Canadian Northern Railway, and they have two spurs about 600 feet long. The yard includes plenty of space to handle 10,000,000 feet. At present they have spurs enough to handle 3,000,000.

Eastern Lumbermen Hold Convention

The third quarterly meeting of the Eastern Lumbermen's Association was held on July 12th at Hampden, Me., at Clark's Bungalow. Previous to the meeting members present enjoyed an old-fashioned State of Maine Shore Feed, during which an excellent musical programme was also provided. A short amount of after dinner speaking was also indulged it. The business meeting was interesting and important, and provided an opportunity for the members to discuss many matters of trade interest. In the evening a buffet lunch was served at the club house, after which the members departed for their homes.

Increased Spruce Production Cost

Quebec Manufacturer Reports an Advance of $2.36 per M ft. for Logs Delivered at the Mill

The figures showing the cost of producing spruce lumber in Eastern Canada, which we published in the Canada Lumberman recently, have been commented upon favorably by a number of readers, most of whom agree that the increases shown are closely in harmony with actual results. One of our readers in the province of Quebec has prepared an analysis of the cost of producing spruce lumber in connection with his operations and has forwarded this to us for publication. This operation is a typical one, of sufficient extent to be considered as about an average of the majority of the operations in the province and its figures therefore are of definite value. The costs analysis furnished by this company relates at present only to logging and driving, thus showing the cost of the logs delivered at the mill. The same company has promised to furnish an analysis of the sawing, piling and shipping costs early in the fall, so that it will then be possible for us to present figures of the complete operations from the woods to the product ready for shipment on the cars.

This company's analysis of logging and driving costs is as follows:—

Logging Cost Per M. Ft.

	1915 and 1916	1916 and 1917
Men, board	$1.24	$1.40
Men, wages	3.28	5.15
Horses, feed	1.24	1.47
Horses, wages	.39	.44
Tools, etc.	.41	.27
Total	$6.56	$8.73

Driving Cost Per M. Ft.

	1916	1917
Men's board	$0.24	$0.19
Men's wages	1.07	1.30
Tools, etc.	.08	.09
	$1.39	$1.58

Cost of Logs at Mill

	1916	1917
Logging	$6.56	$8.73
Drive	1.39	1.58
	$7.95	$10.31

Increase in cost—$2.36 per M. ft.

Other manufacturers are requested to submit figures of their costs so that this important subject may be discussed as fully as possible.

Mr. Hardy's Evidence at Insurance Enquiry

In reporting the evidence given by Mr. E. D. Hardy, the Ottawa press made it appear that Mr. Hardy was in favor of a five per cent. tax on unlicensed companies, whereas the government tax on such companies is now one per cent. Mr. Hardy was not in favor of increasing the tax on unlicensed companies, but was strongly in favor of increasing the tax payment to the Dominion Government on Insurance Companies licensed in Canada and the elimination of a certain class of smaller insurance businesses.

The following statement has been given the Ottawa representative of the Canada Lumberman, by the insurance firm of Hardy and Reynolds—The Canadian Lumberman's Insurance Exchange.

"Mr. E. D. Hardy, of the Canadian Lumberman's Insurance Exchange, recently testified at Ottawa before Mr. Justice Nasten, of the Ontario Insurance Commission, on behalf of the Reciprocal Insurance Companies. It was his opinion that there should not be a tax on unlicensed companies specializing in insurance on lumber and woodworking plants. This is in keeping with a resolution recently passed by the Canadian Lumbermen's Association at Toronto opposing any further tax for this class of insurance."

Brompton Pulp & Paper Dividend

The directors of the Brompton Pulp and Paper Company, Limited, have declared a quarterly dividend of 1¼ per cent. The figures for the first half of the year show a revenue of $664,156 from pulp and paper and on sawmill account, and after payment of expenses there is a surplus revenue of $617,263. Interest and dividends absorb $290,089, leaving $326,274.

Johnson's Veterinary Remedies

are the surest, the most economical and the best medicines with which to equip your stables. They have been on the market for twenty-five years and still retain their superiority over all others. The quality never varies, it is our first consideration.

Prices taking effect July 1st are as follows:

Johnson's Horse Liniment No. 1	Per Gal.	$7.00
Johnson's Horse Liniment No. 1	Quarts, Per Doz.	19.00
Johnson's Horse Liniment No. 1	Pints, Per Doz.	10.00
Johnson's Horse Colic Remedy	Per Gal.	10.00
Johnson's Horse Colic Remedy	Qu. (8 Doses ea.) Doz.	23.00
Johnson's Horse Colic Remedy	Pints (4 Doses ea.) Doz.	12.00
Johnson's Veterinary Healing Ointment (Gall Cure) 2 lb Tins	each 2.25; Doz.	24.00
¼ lb. Tins	Per Doz.	4.00
Johnson's Concentrated Condition Powders 1 lb. Pkgs.	Doz.	4.80
Johnson's Horse Worm Powders, Pkgs.	Per Doz.	2.50
Johnson's Purging Balls	Per Doz.	2.50
Johnson's Antisepting Dusting Powder (For Drying and Healing Sores, Proud Flesh, etc.)	Per Doz.	8.00

Our Family and Van Remedies are as follows:

Pine and Tar Cough Syrup
Purgative Pills
Little Liver Pills
Porous Plasters
Stomach Bitters
Laxative Cold Tablets
Big 4 Liniment—Mosquito Oil
X Ray Liniment
Cholerine Mixture (Diarrhoea)
Headache Powders
Mosquito Oil
All Healing White Ointment

All Drugs and Patent Medicines at Market Prices—Mail orders solicited—Prompt shipments made

A. H. JOHNSON, Wholesale Druggist

COLLINGWOOD, ONT.

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Keep a good Supply on hand at all times

Be prepared for all emergencies. You will be able to save a great deal of money, and perhaps the life of a valuable animal by using one of Dr. Stewart's remedies immediately it is needed. Each is the result of scientific research that has the advantage of being proven in a practical way. Dr.

Stewart's remedies are standard with many of the well known Veterinary Surgeons of this country, and are used in lumber camps and by contractors from coast to coast.

Write for complete details, or send a trial order for any of the remedies listed below.

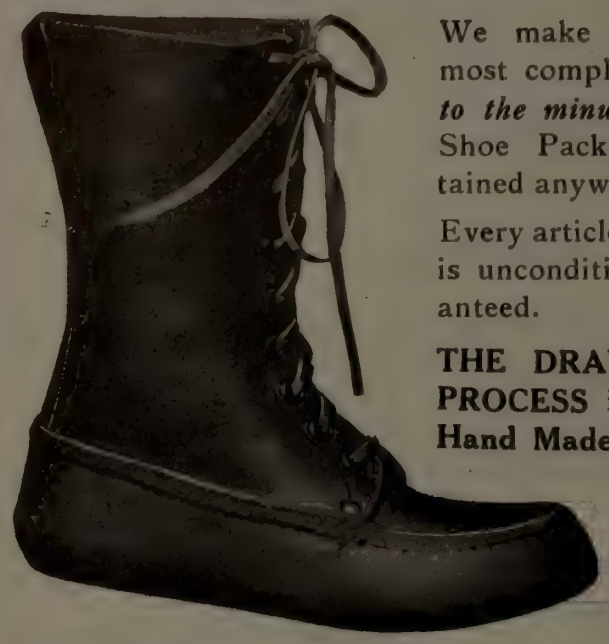
A LIST OF DR. STEWART'S VETERINARY REMEDIES—

Stewart's Sure Cure (antiseptic gall cure), the original, in liquid form, 16-oz. bottles	$9.00 doz.
Stewart's Excelsior Liniment, 32-oz. bottles	9.00 "
Stewart's Lightning Colic Cure, the only colic cure that removes the cause, 16-oz. bottles	8.00 "
Stewart's Pure Condition Powders, 2-lb. air-tight tin can	$5.00 doz.
Stewart's Hoof Ointment, 1-lb. can	5.00 "
Stewart's Heave Relief, large can	5.00 "
Stewart's Cough and Distemper Cure, 50 doses to bottle	7.00 "
Stewart's Proud Flesh Powders	2.50 "

The Palmer Medical Company, Limited

Windsor - Ont.

SHOE PACKS



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Material and Workmanship Always the Best

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Horse Blankets

Oil Tan Mocassins

Shoe Findings and Rubber Heels

Automobile Tires and Accessories

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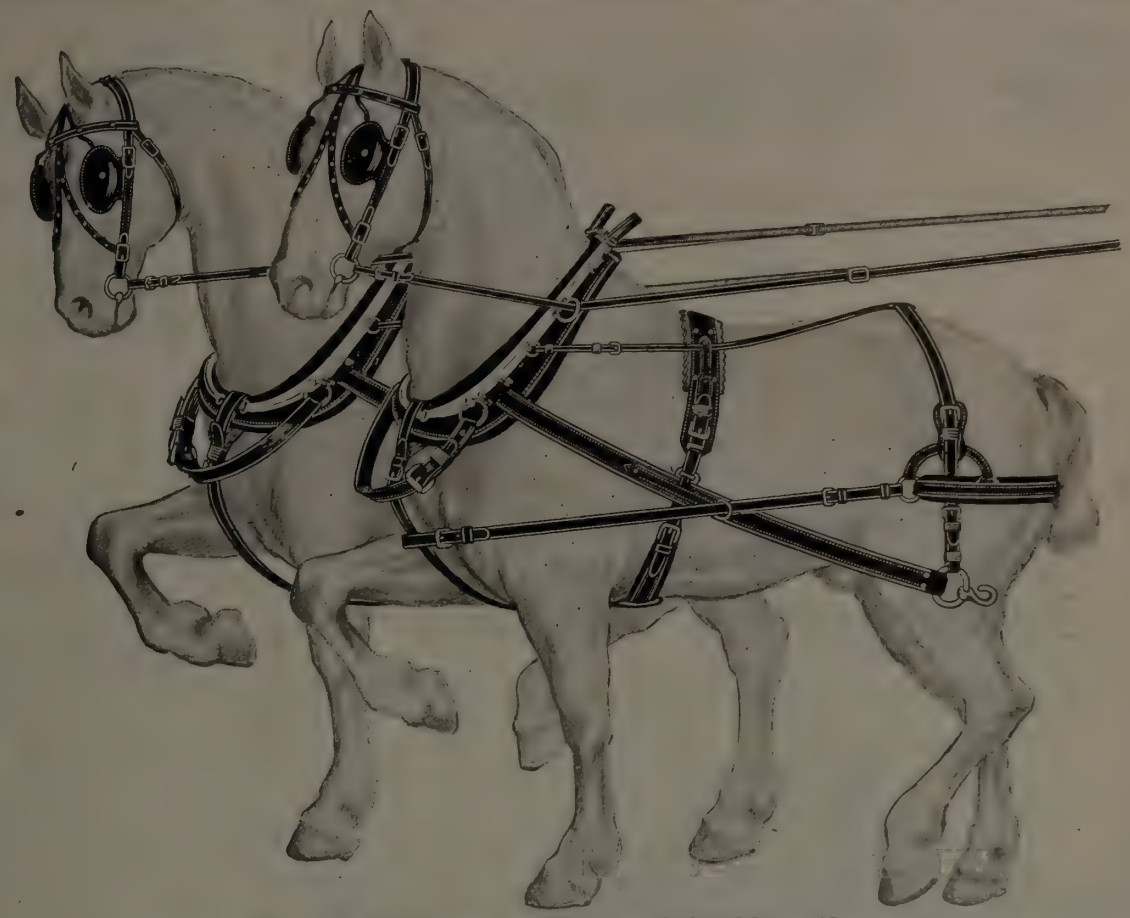

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30-in.	26-in.	16-in.	28-in.	Coal or Wood

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Dr. Bell's Wonder Worm and Physic Ball	.75
Dr. Bell's Wonder Liniment for Horses and Cattle	.75 and 1.00
Dr. Bell's Wonder Lotion for Horses and Cattle	.75 and 1.00
Dr. Bell's Wonder Eye Lotion	.50 and .75
Dr. Bell's Wonder Hoof Ointment and Gall Cure Combined	.50
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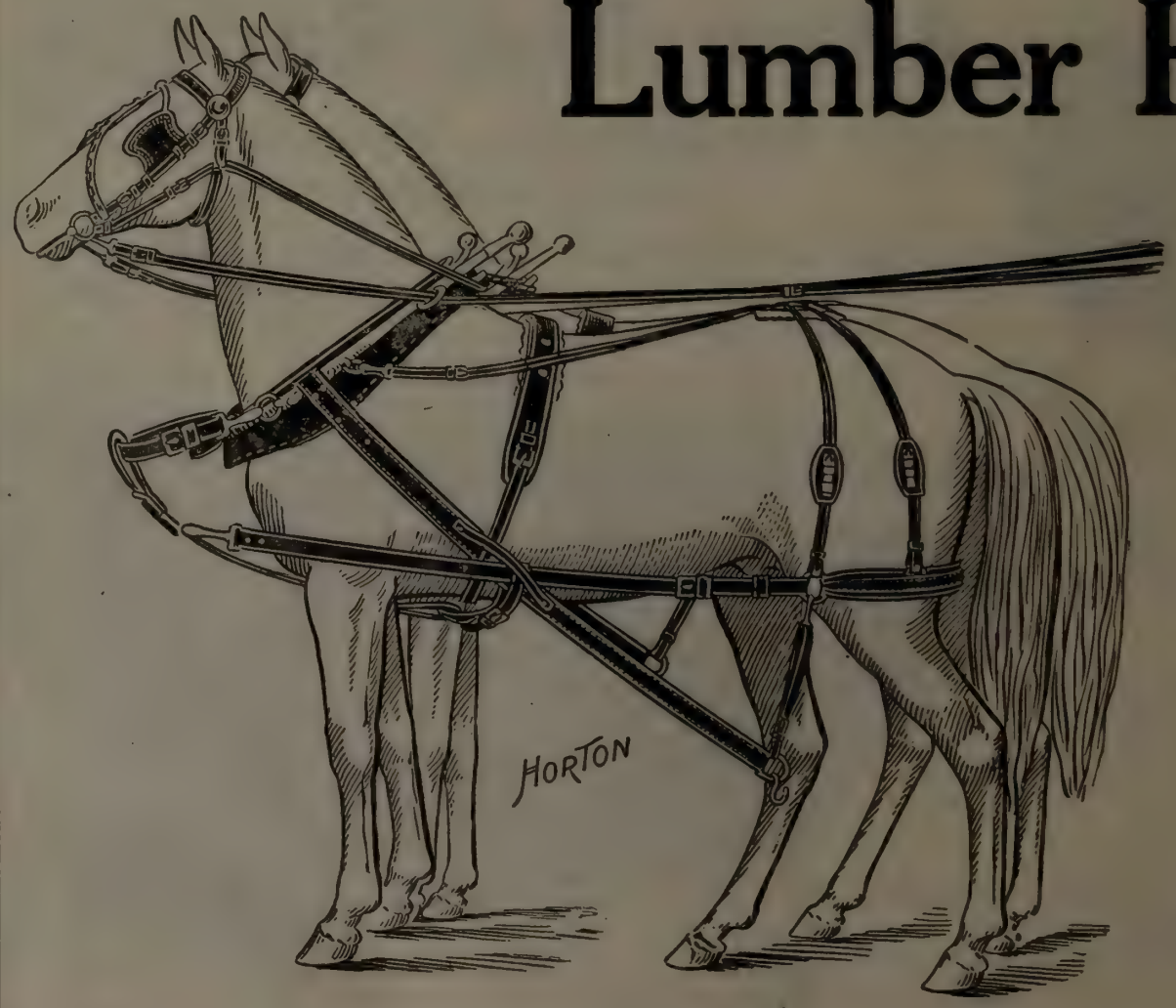

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Particularly suitable for Hauling Lumber

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For Saw and Shingle Mills

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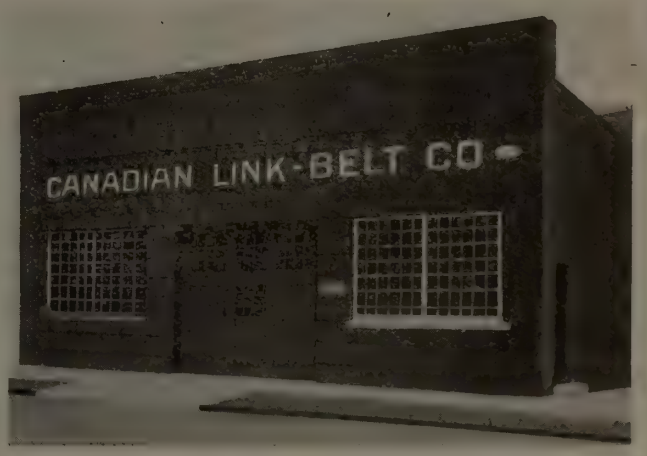

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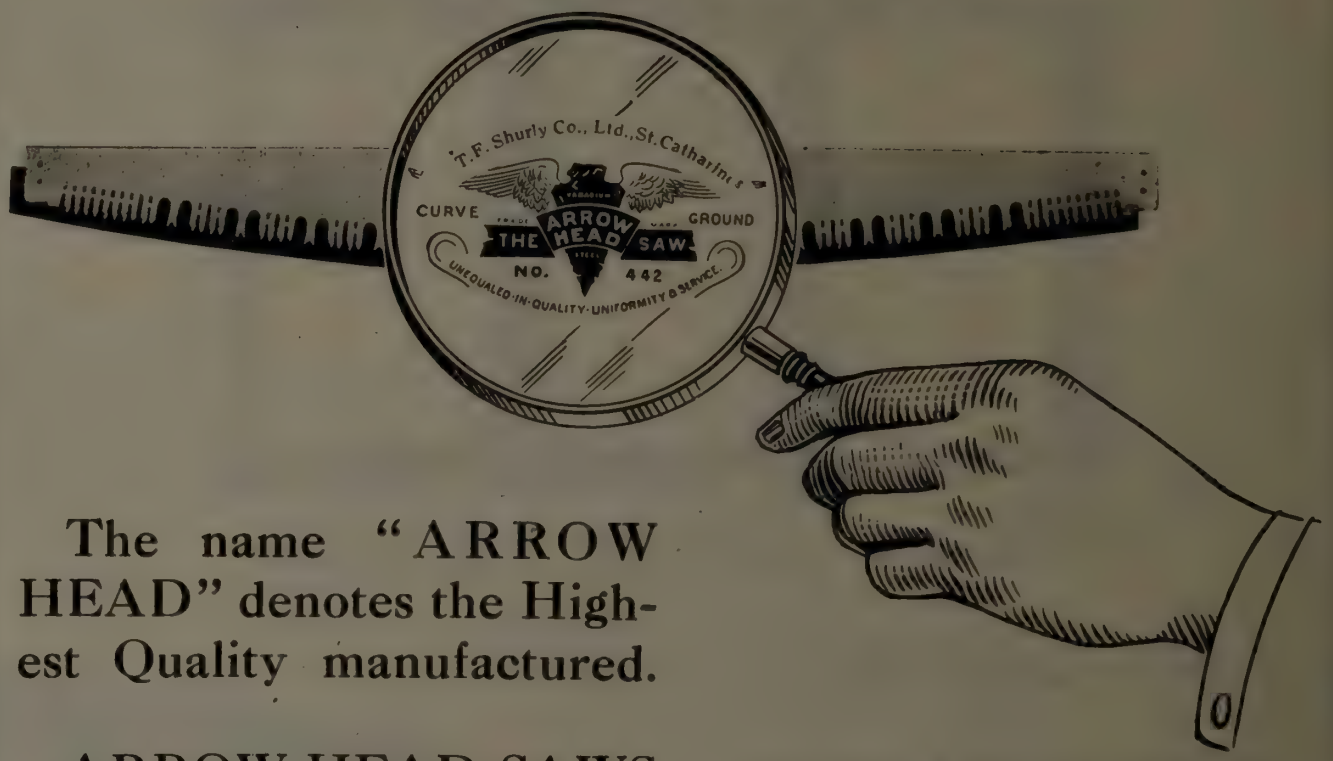
265 WEST WELLINGTON STREET, TORONTO

ARROW HEAD SAWS



The name "ARROW HEAD" denotes the Highest Quality manufactured.

ARROW HEAD SAWS will cut more in less time with the same amount of labor or power than any other Saws made.

VANADIUM STEEL CURVE GROUND

Place your orders now and make sure of delivery.

We specialize in Mill Saws of all descriptions.

T. F. Shurly Co.

Limited

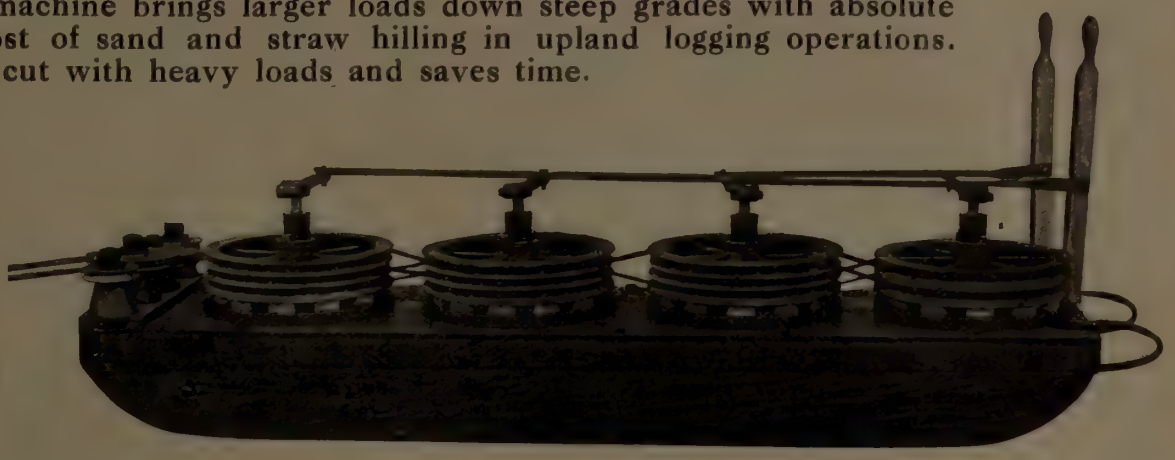
St. Catharines - Ontario, Canada

Barienger Braking Device

This wonderful machine brings larger loads down steep grades with absolute safety. Saves cost of sand and straw hilling in upland logging operations. Takes the short cut with heavy loads and saves time.

Orders must be in early to insure deliveries in season for the coming winter's operations.

Send for photographs and catalogue to-day.



LIST OF CANADIAN USERS

J. H. Macdonald Lumber Company—Blind River, Ont.
Hope Lumber Company—Blind River, Ont.
Gillies Brothers—Braeside, Ont.
The James Maclaren Company—Buckingham, P.Q. (3)
W. C. Edwards Company—Maniwaki, P.Q. (2)
Manley Chew—Midland, Ont. (2)
St. Maurice Lumber Company—Gaspe Harbour, P.Q. (2)
John Fenderson & Son, Sayabec, P.Q.
Graves, Bigwood & Co.—Byng Inlet, Ont.
Victoria Harbour Lumber Company—Blind River, Ont.
Eddy & Glynn—Sault. Ste. Marie, Ont.
Price Brothers Company—Jonquiere, P.Q.
Colonial Lumber Company—Pembroke, Ont.

Ryther Multiple Saw Slasher

USED IN CANADA BY

Anglo-Newfoundland Development Co.

Abitibi Power & Paper Company

Both of the above concerns have within the last three months ordered duplicates of equipment furnished them several years ago.

Laurentide Company—Grand Mere, P.Q.
Belgo Canadian Pulp and Paper Company—Shawinigan Falls, P.Q.
Donnacona Paper Company—Donnacona, P.Q.
Spanish River Pulp and Paper Mills, Spanish River, Ont.
Spanish River Pulp and Paper Mills—Sturgeon Falls, Ont.
North Shore Power, Railway and Navigation Company—Clarke City, P.Q.
Price Brothers Company—Kenogami, P.Q.
Chicoutimi Pulp Company—Chicoutimi, P.Q.

Send for catalogue and prices.

RYTHER & PRINGLE COMPANY

Carthage, N.Y.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:

1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better	62 00	64 00
1½-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	52 00	54 00
4/4 No. 2 and 3 cuts		33 00
5/4 and 6/4 No. 2 and 3 cuts	38 00	40 00
8/4 No. 2 and 3 cuts	40 00	42 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	35 00	36 00
1 x 6 common and dressing	37 00	39 00
1 x 8 common and dressing	38 00	40 00
1 x 10 common and dressing	40 00	42 00
1 x 12 common and dressing	43 00	45 00
1 x 10 and 12 mill cull stocks	30 00	31 00
1-in. mill cull sidings	27 00	28 00
5/4 and 6/4 x 4 m.r., m.c. out	35 00	36 00
5/4 and 6/4 x 5 m.r., m.c. out	35 00	36 00
5/4 and 6/4 x 6 m.r., m.c. out	35 00	36 00
5/4 and 6/4 x 8 m.r., m.c. out	36 00	37 00
5/4 and 6/4 x 10 m.r., m.c. out	42 00	43 00
5/4 and 6/4 x 12 m.r., m.c. out	44 00	45 00
2 x 10 common	36 00	38 00
2 and 3 x 12 common	39 00	40 00
1 x 8 box and common		33 00
1 x 10 inch box and common		35 00
1 x 12 inch box and common		35 00
1 in. mill run sidings		35 00
1-in. mill run shorts		28 00
1-in. mill run Norway		30 00
2-in. mill run Norway	33 00	35 00
Norway, c. and cf. 1-in.	38 00	40 00
Norway, c. and cf. 1½-in.	39 00	41 00
Norway, c. and cf. 2-in.	39 00	41 00
Spruce mill run 1-in. and 2-in.	31 00	32 00
Spruce mill culls	26 00	27 00

Hemlock No. 1:

1 x 4 and 5-in. x 9 to 16 ft.		28 00
1 x 6-in. x 9 to 16 ft.		27 00
1 x 8-in. x 9 to 16 ft.		28 00
1 x 10 and 12 in. x 9 to 16 ft.		29 00
1 x 7, 9 and 11-in. x 9 to 16 ft.		26 00
1 in. No. 2, 6-ft. to 16-ft.		20 00
2 x 4 to 12, 10 and 16 ft.		27 00
2 x 4 to 12 in., 12 and 14 ft.		27 00
2 x 4 to 12-in., 18 ft.		30 00
2 x 4 to 12-in., 20 ft.		32 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		22 00
Clear in. B.C. cedar, kiln dried	50 00	55 00

Douglas Fir:

Dimension Timber up to 32 feet:

8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	40 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16	41 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.	41 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.	42 00
10x20, 18x20, up to 32 ft.	42 50
6x18, 8x18, up to 32 ft.	42 50
6x20, 8x20, up to 32 ft.	42 00

Timber in lengths over 32 feet subject to negotiation.

Fir flooring, 1 x 3, edge grain	43 50
Fir flooring, 1 x 4, edge grain	46 50
Fir flooring, 1 x 4, flat grain	39 50
No. 1 and 2, 1-in. clear Fir rough	50 75
No. 1 and 2, 1¼ and 1½ in., clear Fir rough	56 00
No. 1 and 2, 2-in. clear Fir rough	52 00
1½-in. No. 1, 4-ft. pine lath.	6 00
1½-in. No. 2 4-ft. lath	5 70
1½-in. 32-in. pine	2 75
1½-in. No. 1 4-ft. hemlock lath.	4 50
1½-in. mill run hemlock lath.	4 25
XX B. C. cedar shingles	3 35
XXX 6 butts to 2-in.	4 45
XXXXX	4 95

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	$65 00	71 00
Ash, white, No. 1 common		45 00
Ash, brown, 1sts and 2nds, 4/4		57 00
Ash, brown, com. and bet.		45 00
Ash, brown, 1sts and 2nds, 6/4 and 8/4		65 00
Birch, 1st and 2nds, 4/4		55 00
Birch, No. 1 com. and bet., 4/4		47 00
Birch, 1st and 2nds, 6/4 and 8/4		65 00
Birch, 1st & 2nds, 10/4 and 12/4		78 00
Birch, 1st and 2nds, 16/4		85 00
Basswood, 1sts and 2nds, 4/4		53 00
Basswood, No. 1 com. and bet., 4/4	45 00	47 00
Basswood, No. 2 and 3 common		28 00
Basswood, 6/4 and 8/4, 1sts and 2nds	58 00	60 00
Basswood, 6/4 and 8/4, com. and bet.		48 00
Basswood, 4/4, No. 2 com. and bet.		42 00
Soft elm, 1sts and 2nds, 4/4		48 00
Soft Elm, No. 1 com. and bet., 4/4		43 00
Soft Elm, No. 2 and 3 common		20 00
Soft Elm, 6/4 and 8/4, 1 and 2		60 00
Rock Elm, 1sts and 2nds, 6/4 and 8/4		65 00
Rock Elm, No. 2 com. and bet., 6/4 and 8/4		45 00
Soft Maple, 1sts and 2nds, 4/4		48 00
Soft Maple, com. and bet., 4/4.		38 00
Soft Maple, 6/4 and 8/4, 1sts and 2nds		55 00
Hard Maple, 1sts and 2nds, 4/4		47 00
Hard Maple, com. and bet., 4/4		42 00
Hard Maple, 12/4, 1sts and 2nds	65 00	70 00
Hard Maple, 16/4, 1sts and 2nds	85 00	90 00
Red Oak, plain, 1sts and 2nds, 4/4		64 50
Red Oak, plain, No. 1 com., 4/4		44 50
Red Oak, plain, No. 2 com., 4/4		33 50
Red Oak, plain, 1sts and 2nds, 6/4 and 8/4		70 00
Red Oak, plain, 1sts and 2nds, 12/4 and 16/4	77 00	85 00
White Oak, plain, 1sts and 2nds, 4/4		
White Oak, plain, No. 1 com., 4/4		44 50
White Oak, plain, No. 2 com., 4/4		33 50
Red and White Oak, plain, 1sts and 2nds, 5/4 and 6/4	65 00	68 00
Red and White Oak, plain, No. 1 com., 5/4 and 6/4		48 00
Red and White Oak, plain, No. 2 com., 5/4 and 6/4		35 00
Red and White Oak, plain, 1sts and 2nds, 8/4		70 00
Red and White Oak, plain, No. 1 com., 8/4		50 00
White Oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00	85 00
White Oak, ¼ cut, 1sts and 2nds, 4/4		89 00
White Oak, ¼ cut, 5/4 and 664, 1sts and 2nds		92 00
White Oak, ¼ cut, No. 1 com.		57 00
Hickory, 1sts and 2nds, 4/4		64 00
Hickory, 6/4, 1sts and 2nds		70 00
Hickory, 8/4, 1sts and 2nds		75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:

1-in. x 7-in. and up	$55 00	57 00
1¼-in. and 1½-in. x 8-in. & up	70 00	72 00
2-in. x 7-in. and up	72 00	74 00
No. 2 cuts 2 x 8-in. and up	45 00	48 00

Pine good strips:

1-in.	45 00	46 00
1¼-in. and 1½-in.	55 00	56 00
2-in.	56 00	57 00

Pine good shorts:

1-in. x 7-in. and up	45 00	50 00
1-in. x 4-in. to 6-in.	32 00	34 00
1¼-in. and 1½-in.	53 00	55 00
2-in.	54 00	56 00
7-in. to 9-in. A sidings	30 00	32 00
Pine, No. 1 dressing sidings	42 00	45 00
Pine, No. 1 dressing strips	40 00	42 00
Pine, No. 1 dressing shorts	34 00	36 00
Pine, 1-in. x 4-in. s.c. strips		34 00
Pine, 1-in. x 5-in. s.c. strips		35 00
Pine, 1-in. x 6-in. s.c. strips		37 00
Pine, 1-in. x 7-in. s.c. strips		37 00
Pine, 1 x 8 in., s.c., 12 to 16 ft.		38 00
Pine, 1-in. x 10-in. M. R.		40 00
Pine, s.c. sidings, 1½ and 2-in.	30 00	38 00
Pine, s.c. strips 1-in.		33 00
1¼, 1½ and 2-in.	36 00	37 00
Pine, s.c. shorts, 1 x 4 to 6 in.	29 00	30 00
Pine, s.c. and bet., shorts 1 x 5		32 00
Pine, s.c. and bet., shorts, 1 x 6		33 00
Pine, s.c. shorts, 6'-11', 1"x 10"		36 00

Pine box boards:

1"x 4" and up, 6'-11'		24 00
1"x 3", 12'-16'		24 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	25 00	27 00
Pine, mill cull stock, 1 x 12		32 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.		25 00
O. culls r & w p	18 00	20 00

Red Pine, log run:

mill culls out, 1-in.	28 00	30 00
mill culls out, 1¼-in.	28 00	30 00
mill culls out, 1½-in.	28 00	30 00
mill culls out, 2-in.	28 00	30 00
mill culls, white pine, 1"x 7" and up	29 00	30 00

Mill run Spruce:

1"x 4" and up, 6' 11'	24 00	25 00
1"x 4" and up, 12'-16'		30 00
1"x 9"-10" and up, 12'-16'		36 00
1¼"x 7" 8-9" and up, 12'-16'		35 00
1¼"x 10" and up, 12'-16'		36 00
1½" & 2"x12" and up, 12'-16'		40 00
Spruce, 1-in. clear (fine dressing and B)		37 00
Hemlock, 1-in. cull	18 00	20 00
Hemlock, 1-in. log run	23 00	24 00
Hemlock, 2x4, 6, 8, 10, 12/16'	26 00	28 00
Tamarac	24 00	26 00
Basswood, log run, dead culls out	30 00	40 00
Basswood, log run, mill culls out	26 00	28 00
Birch, log run	30 00	32 00
Soft Elm, common and better, 1, 1½, 2-in.	25 00	30 00
Ash, black, log run	32 00	40 00
1 x 10 No. 1 barn	40 00	45 00
1 x 10 No. 2 barn	38 00	40 00
1 x 8 and 9 No. 2 barn		38 00

Lath per M:

No. 1 white pine, 1½-in. x 4-ft.	5 50	5 75
No. 2 white pine		5 25
Mill run white pine		5 50
Spruce, mill run 1½-in.		5 00
Red pine, mill run		4 75
Hemlock, mill run		4 00
32-in. lath		2 25

White Cedar Shingles:

xxxx, 18-in.		5 00
Clear butt, 18-in.		4 00
18-in. xx		2 25
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

White Pine

	cts.	
First class Ottawa waney, 18-in. average, according to lineal.	60	65

Oak

According to average and quality	60	70

Elm

According to average and quality, 40 to 45 feet	80	85
According to average and quality, 30 to 35 feet	50	60

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Birch Planks

1 to 4 in.	20 00	25 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$74 00
1 in., 8 in. and up wide	83 00
1¼ and 1½ in. and up wide	86 00
2 in. and up wide	88 00

Cuts and Better

4/4 x 8 and up No. 1 and better	58 00
6/4 x 8 and up No. 1 and better	70 00
8/4 x 8 and up No. 1 and better	72 00
6/4 x 6 and up No. 2 and better	61 00
8/4 x 6 and up No. 2 and better	63 00
6/4 x 6 and up No. 3 and better	55 00
8/4 x 6 and up No. 3 and better	59 00

No. 1 Cuts

1 in., 8 in. and up wide	50 00
1¼ in., 8 in. and up wide	59 00
1½ in., 8 in. and up wide	61 00
2 in., 8 in. and up wide	64 00
2½ and 3, 8 in. and up wide	84 00
4 in., 8 in. and up wide	90 00

No. 2 Cuts

1 in., 6 in. and up wide	36 00
1¼ in., 6 in. and up wide	47 00
1½ in., 6 in. and up wide	48 00
2 in., 6 in. and up wide	49 00
2½, 3 and 4 in., 6 in. and up wide	68 00

No. 3 Cuts

1 in., 6-in. and up wide		30 00
1¼ and 1½ in., 6-in. and up wide		35 00
2 in., 6-in. and up wide		36 00
2½, 3 and 4-in., 6-in. and up wide	45 00	48 00

Common and Dressing Mill Run

1-in. x 4 in.	32 00
1-in. x 5-in.	32 00
1-in. x 6-in.	34 00
1-in. x 8-in.	34 00
1-in. x 10 in.	36 00
1 in. x 12 in.	38 00
1-in. x 13-in. and up	38 00
1¼, 1½ and 2 in.	40 00

No. 1 Barn

1 inch	38 00	48 00
1¼, 1½ and 2-in.	45 00	51 00
2½ and 3-in.		55 00
4 inch		58 00

No. 2 Barn

1 inch	35 00	42 00
1¼, 1½ and 2-in.	38 00	44 00
2½ and 3-in.		46 00

No. 3 Barn

1 inch	32 00	36 00
No. 1, 1, 1¼, 1½, 2-in.		34 00

Box

No. 1, 1, 1¼, 1½, 2-in.	29 00	31 00
No. 2, 1¼, 1½, 2-in.		26 00

Mill Culls

Mill run culls, 1-in.		27 00
1, 1¼, 1½ and 2-in.		28 00
No. 2	24 00	26 00

Lath

No. 1, 32-in. pine	2 00
No. 2, 48-in. pine	5 00
No. 1, 48-in. pine	5 50
No. 3, 48-in. pine	4 50
Hemlock Lath, 48-in.	4 50

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac.

Dimension. S. 1 S. and 1 E.

	6 ft.	8 ft.	10 ft.	14 & 16 ft.
2 x 4, 6, 8	16 00	19 00	22 50	23 50
2 x 10	20 00	20 50	23 50	24 50
2 x 12	20 00	21 00	25 50	25 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH.

Mountain Stock.

Dimension.

2 x 4, 8, 12, 14, 16	23 50
2 x 4; 10, 18, 20	25 50
2 x 6, 8 to 16	23 50
2 x 8, 8 to 16	23 50
2 x 4-6 and 8 in.; 24, 26, 28, 30, 32 ft.	31 50
2 x 10 and 2 x 12; 8-16 ft.	28 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	30 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	32 50

No. 1 Common Boards.

4 inch	23 00
6 inch	25 50
8, 10, 12 inch	27 50
Mixed widths	26 50

Flooring.

4 or 6 inch No. 1	37 00
4 or 6 inch No. 2	32 00
4 or 6 inch No. 3	26 00

Shiplap—Finished.

6 inch	24 00
8, 10 and 12 inch	25 00

Siding.

6 inch No. 1	37 00
6 inch No. 2	35 00
6 inch No. 3	27 00

Lath.

No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed)	4 50

PINE—ROUGH TIMBER.

3 x 6 in.; 8 to 16 ft.	29 10
3 x 8 in.; 8 to 16 ft.	26 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	29 00
4 x 10 to 10 x 10, 8 x 8, 6x 12 in. up to 32 ft.	31 00

BRITISH COLUMBIA COAST FIR.

Dimension S1S and E.

2 x 4 in.; 6 and 8 ft.	22 50
2 x 4 in.; 12 and 14 ft.	23 50
2 x 4 in.; 10 and 16 ft.	24 50
2 x 4 in.; 18 and 24 ft.	25 50
2 x 4 in.; 22 and 24 ft.	26 50
2 x 4 in.; 26 to 32 ft.	28 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	25 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	27 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	28 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	30 00
2 x 14 in.; 10 to 16 ft.	30 00
2 x 14 in.; 18 and 20 ft.	32 00
2 x 14 in.; 22 and 24 ft.	33 00
2 x 14 in.; 26 to 32 ft.	35 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	26 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	27 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	28 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	29 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	31 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft.	29 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft.	30 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft.	30 50

FLOORING.

Nos. 1 and 2, 1 x 3 in., E. G.	37 00
Nos 1 and 2, 1 x 4 in., E. G.	40 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in. F. G.	30 00
Nos. 1 and 2, 1 x 6 in., F. G.	35 00
No. 3, 1 x 4 in.	28 00
No. 3, 1 x 6 in.	33 00

No. 3 Edge grain $3 per M. extra.

SHIPLAP.

B. C. fir, 6 in.	23 50
B. C. fir, 8, 10, 12 in.; 8 to 16 ft.	24 50
No. 2 shiplap, 6 in.	23 50
No. 2 shiplap, 8, 10 and 12 in.	24 50

FIR, COMMON BOARDS, S1S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	22 00
Common boards, 8 to 12 in.	23 00
No. 2 mixed widths	18 00
No. 2 boards, 8 to 12 in.	19 00

SHINGLES.

XXX B. C. cedar	3 05

LATH.

Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's	4 50
Cedar lath, ⅜ x 1⅜ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

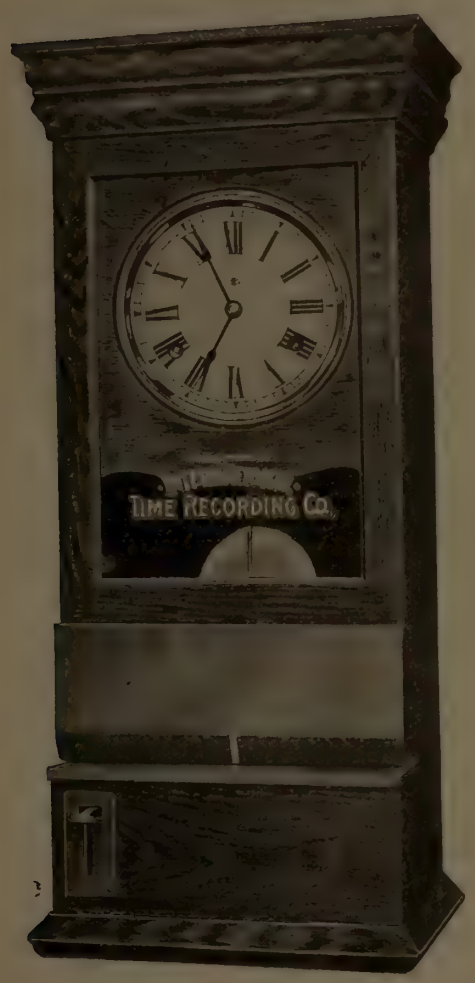
Uppers, 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00
No. 1 Moulding 8/4	62 00

(Continued on page 172)

The Difference

This margin of card shows starting and stopping time of each job, in decimals

E	Elapsed Time	CLOCK RECORD	
D	2.2	S 15	9.2
		B 15	7.0
	1.9	S 15	11.1
		B 15	9.2
	.9	S 15	12.0
		B 15	11.1
	3.4	S 15	15.4
		B 15	12.0
	.6	S 15	16.0
		B 15	15.4



International Cost Recorder essential if you would have "control" of your factory burdens.

WHAT is the difference between the labor hours you buy and the "productive" hours in your plant—the answer is "Vital." How do you arrive at it?

By pencil records—surely not. They are unsafe, unreliable and out of date.

Your labor purchase should be printed.

Your labor cost of each job should be printed.

The difference is Vital—it is your factory burden. But be sure all records are printed. No forced balances.

The International Time Recording Company of Canada, Limited

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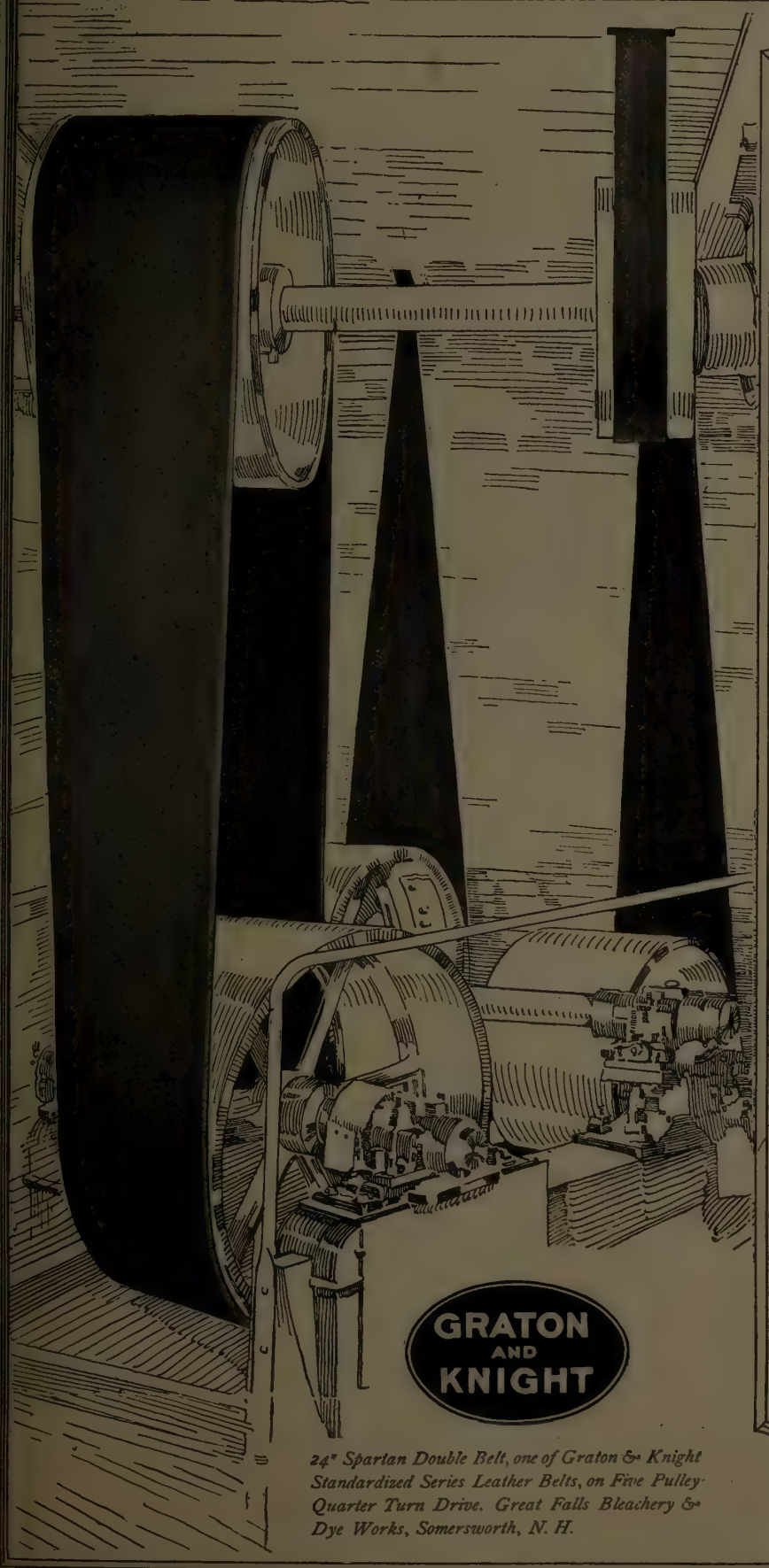
(Continued on page 174)

GRATON & KNIGHT

Standardized Series LEATHER BELTING

Tanned by us for belting use



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It Begins in the Tannery

Leather is the standard belting material.

To us, the largest belting makers in the world, every possible belting material lies open for selection and use. But the belting experience of generations points to the unescapable fact that leather has the properties necessary to make good belting.

Leather that is properly tanned for belting is tough, flexible, durable and prehensile. It preserves the natural softness and mobility of the skin, ensuring an effective grip on the pulley surface.

We have standardized these requirements of perfectly tanned belt leather. The standard in each case is the highest **working** efficiency in the finished belt.

Since the market cannot supply tanned belt leather that continuously measures up to Graton & Knight Standards, we tan our own hides. Last year, we tanned 285,000 of them, in our own tannery. We tanned them for **belts.** We tanned them to definite and uniform standards of belting requirements.

This standardization of material is the foundation of Graton & Knight quality.

It makes the Standardization of Graton & Knight Belts an actual, practical thing.

Think what other standardized products have done for you—and consider the standardization of belting on that basis. Let us send you complete information on the subject.

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No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	46 - 48	28 - 30	18 - 20
5/4 to 8/4	58 -60	36 - 38	20 - 24
10/4 to 16/4	68 - 70	48 - 50	28 - 30

RED BIRCH

4/4	58 - 60	38 - 40	22 - 24
5/4 to 8/4	60 - 62	40 - 42	24 - 26

SAP BIRCH

4/4	48 - 50	32 - 34	20 - 22
5/4 and up	50 - 52	34 - 36	22 - 24

SOFT ELM

4/4	40 - 42	28 - 30	20 - 22
5, 6 & 8/4	42 - 44	30 - 32	20 - 22

BASSWOOD

4/4	44 - 46	34 - 36	22 - 24
Thicker	42 - 44	32 - 34	22 - 24

PLAIN OAK

4/4	52 - 54	33 - 35	19 - 21
5/4 to 8/4	51 - 53	29 - 31	17 - 19

ASH, WHITE AND BROWN

4/4	51 - 54	29 - 31	19 - 21
5/4 to 8/4	61 - 64	34 - 36	20 - 22
10/4 and up	74 - 87	46 - 48	22 - 24

BOSTON, MASS.

White pine uppers, 1 to 2 in.		119 00
Selects, 1 to 2 in.	106 00	109 00
Fine common, 1 in.		78 00
Fine common, 1¼ to 2 in.	85 00	87 00
No. 1 Cuts, 1 in.		60 00
No. 1 Cuts, 1¼ to 2 in.	70 00	75 00
No. 2 Cuts, 1 in.		49 00
No. 2 Cuts, 1¼ to 2 in.	60 00	66 00
Barn Boards, No. 1, 1 x 12		63 00
No. 1, 1 x 10		53 00
No. 1, 1 x 8		50 00
No. 2, 1 x 12		55 00
No. 2, 1 x 10		50 00
No. 2, 1 x 8		47 00
No. 3, 1 x 12		48 00
No. 3, 1 x 10		46 00
No. 3, 1 x 8		44 00
Canadian spruce boards		30 00
Spruce, 12 in. dimension		42 00
Spruce, 10 in. dimension		40 00
Spruce, 9 in.		38 00
Spruce, 8 in. under dimen.		36 00
10 and 12 in. random lengths, 8 ft. and up		36 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7		29 00
3 x 4 and 4 x 4 in.	30 00	31 00
2 x 8 in.		33 00
All other random lengths, 7-in. and under, 8 ft. and up	29 00	30 00
5-inch and up merchantable boards, 8 ft. and up, p 1s..		30 00
1 x 2		27 00
1 x 3		26 00
1½-in. spruce laths		5 15
1½-in. spruce laths		4 90

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Extras		4 90
Clears		4 50
Second Clears	3 25	3 50
Clear whites		2 40
Extra 1s (Clear whites in)	1 75	2 25
Extra 1s (Clear whites out)	1 65	1 90
Red Cedar Extras, 16-in. 5 butts to 2-in.		5 25
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		5 40
Red Cedar Perfections, 5 butts to 2¼		6 00
Washington 16-in. 5 butts to 2-in. extra red cedar.		5 00

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H. W. BLANCHARD, Treas.

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Eastern Spruce

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Owing to constantly increasing sales we are anxious to establish new connections with Eastern Spruce mills, for shipment by car to Boston and New York markets, or by canal boat from Quebec to New York.

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"ASBESTOL" Gloves and Mittens have built up a country-wide reputation for all round *service, comfort* and *wearing qualities*. It is to your immediate advantage to familiarize yourself with "ASBESTOL"

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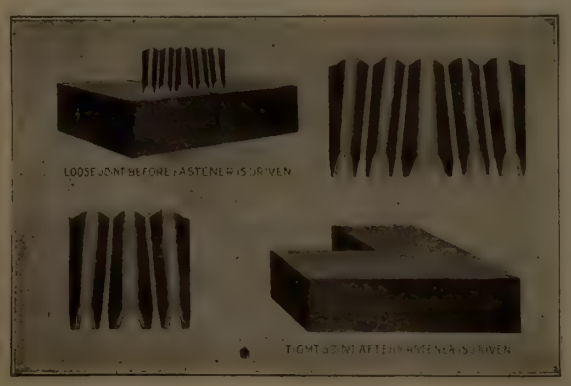

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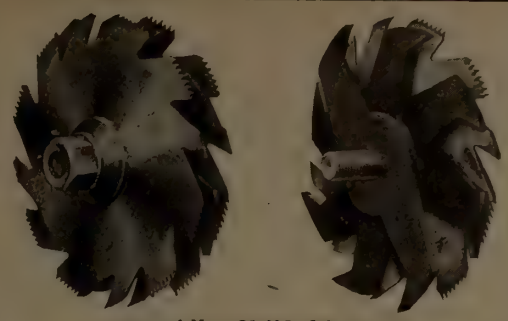

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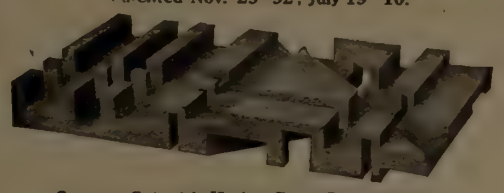

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A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

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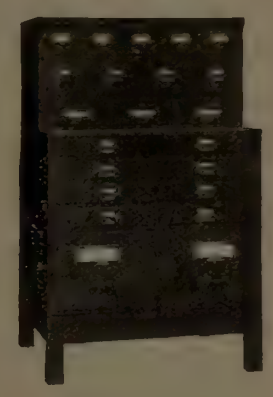

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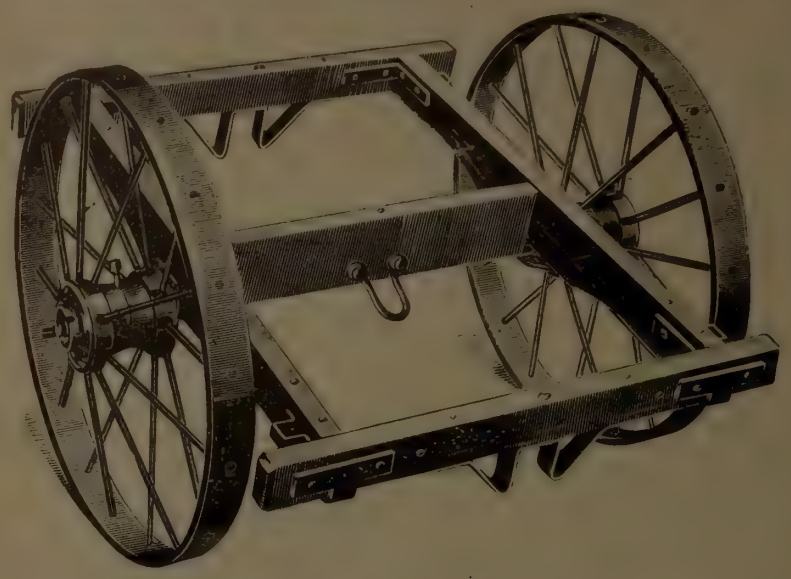

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— MORE WORK AND LESS WORRY —

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Large Work Capacity
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Leading shipbuilding companies are standardizing "LITTLE DAVID" Tools because of their capacity for work, ready control and low air consumption. Other features which have turned the scale in favor of these tools are their simple construction and low upkeep costs.

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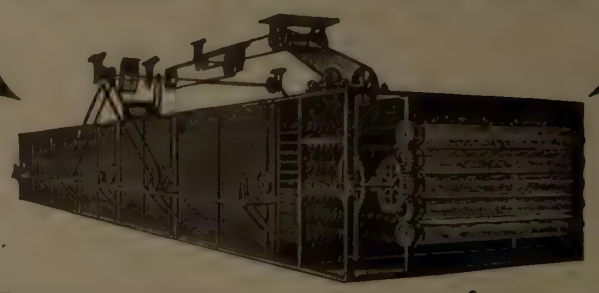

Dries enormous amount of veneer perfectly flat and pliable at minimum cost, without checks or splits

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Shaft Hangers—Couplings—Pulleys—Shafting—Pillow Blocks—Collars

THE PRICE is never right if the quality is wrong. QUALITY in power transmission equipment means correct design, based on long experience, and skill in manufacturing and finishing.

When you buy BOND transmission machinery you know the quality is right for we have had twenty-five years' experience.

And at the same time BOND transmission equipment can be bought at prices as low as are now charged for many inferior lines.

Write to-day for complete catalogue

Canadian Bond Hanger & Coupling Co.,

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ALEXANDRIA - ONTARIO

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A Profitable Industry For Lumbermen

There is a handsome return on any investment in the chemical industry—particularly in the manufacture of those chemicals which we heretofore imported from Germany.

The industry is particularly attractive to lumbermen as many valuable chemicals are obtainable from wood waste by our complete wood distillation and chemical plant.

Guaranteed Results

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GLASGOW, SCOTLAND LIMITED

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Your New Saw Mill

Will give you the best service and the longest service with the least expense for upkeep—If it is a Fisher & Davis Mill.

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For Refuse Burners, Boiler Settings, Kilns, Dutch Ovens, Etc.

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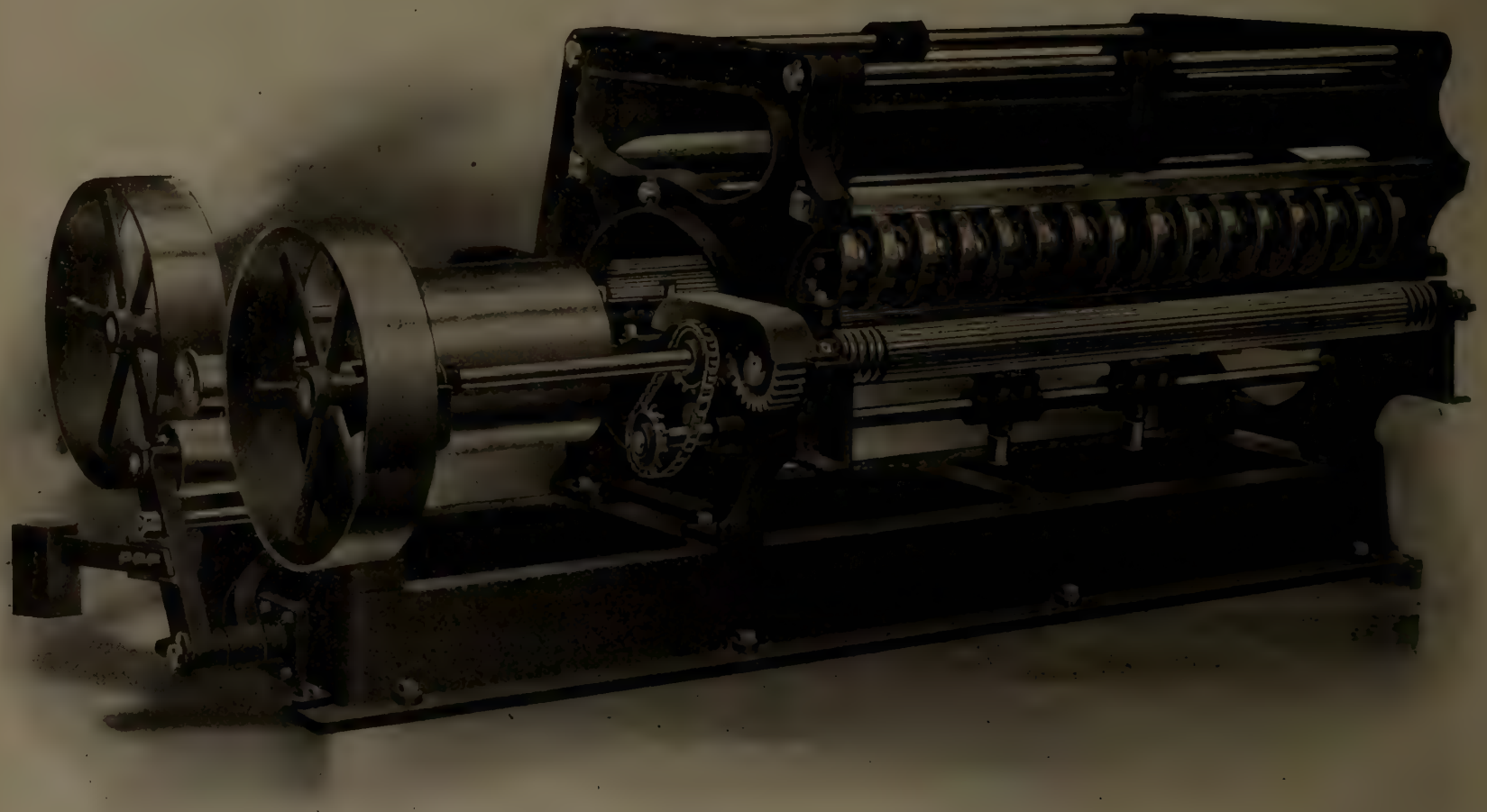
Heavy Duty Edger



These sturdy heavy duty edgers are built in sizes of 48 inch, 54 inch, 60 inch, 66 inch, 72 inch and 84 inch.

A feature in the construction of these machines is the casting of the base in one piece. This makes the machine self-contained and always in alignment.

We will be pleased to send you bulletin describing these edgers and giving their specifications.

The E. Long Manufacturing Co., Ltd.

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BRAND

Showing a section of the Glove cutting tables, where good liberal sizes are allowed for in making lumbermen's gloves and mittens.

Known from Coast to Coast

Glove operators' tables, where the gloves are put together with strong and careful sewing to stand the hard wear of the lumbermen.

KNOWING the requirements of the Lumbermen is a great advantage to the manufacturer in making suitable goods. Mr. Long, while a salesman, visited and sold the most prominent lumber camps from coast to coast and no doubt the trade mark "Bob Long" is to-day familiar to many of the operators. He studied and specialized on their requirements and can safely take credit for many of the improvements in the merchandise required by the lumbermen. In work gloves he improved the mitten with the chopper's thumb and exclusively designed a special glove for Riggers.

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Where Bob Long large overalls and clothing specialties for Lumbermen are made.

We Manufacture Everything We Sell

Where machinery is the big factor in making everything in Knit Goods better for the Lumberman.

R. G. LONG & CO., LIMITED

Toronto - Canada

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Clothing for Lumbermen

A R C
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Established 1852

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A. R. Clarke & Co.

Limited

Montreal **Toronto** Vancouver

Vol. 37 Toronto, August 15, 1917 No. 16

Canada Lumberman & Wood Worker

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12 to 80 pounds per yard.

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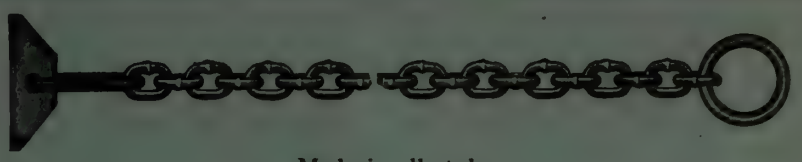

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Electric-Welded Boom Chain
We also specialize
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Made in Canada — Write to — Fully Guaranteed
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Waterproof and Stretchless.
The best belt for sawmills.
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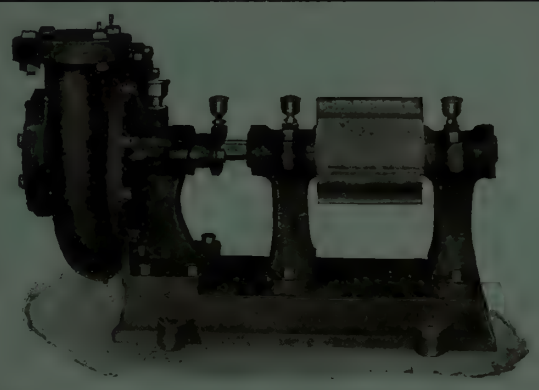

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Power
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For high pressure steam uses our "Beaver" valves will fill every requirement perfectly. "Beaver" Globe Valves, Check Valves, Angle Valves, and Cross Valves are made in sizes 1½-inch to 3-inch, all bronze, and sizes 2½-inch to 10-inch iron or semi-steel body, bronze mounted. The Angle Valve illustrated is constructed with outlet under level of seat, leaving no pocket where water may lodge when valve is closed. Can be furnished in stop or adjustable check pattern. Write for complete description and prices of "Beaver" Valves and any of our lines of Brass Goods.

The James Morrison Brass Mfg. Co., Limited
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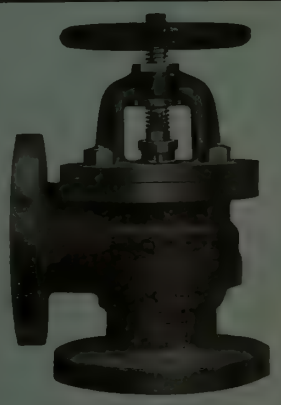

Beaver Angle Valves
MADE IN CANADA

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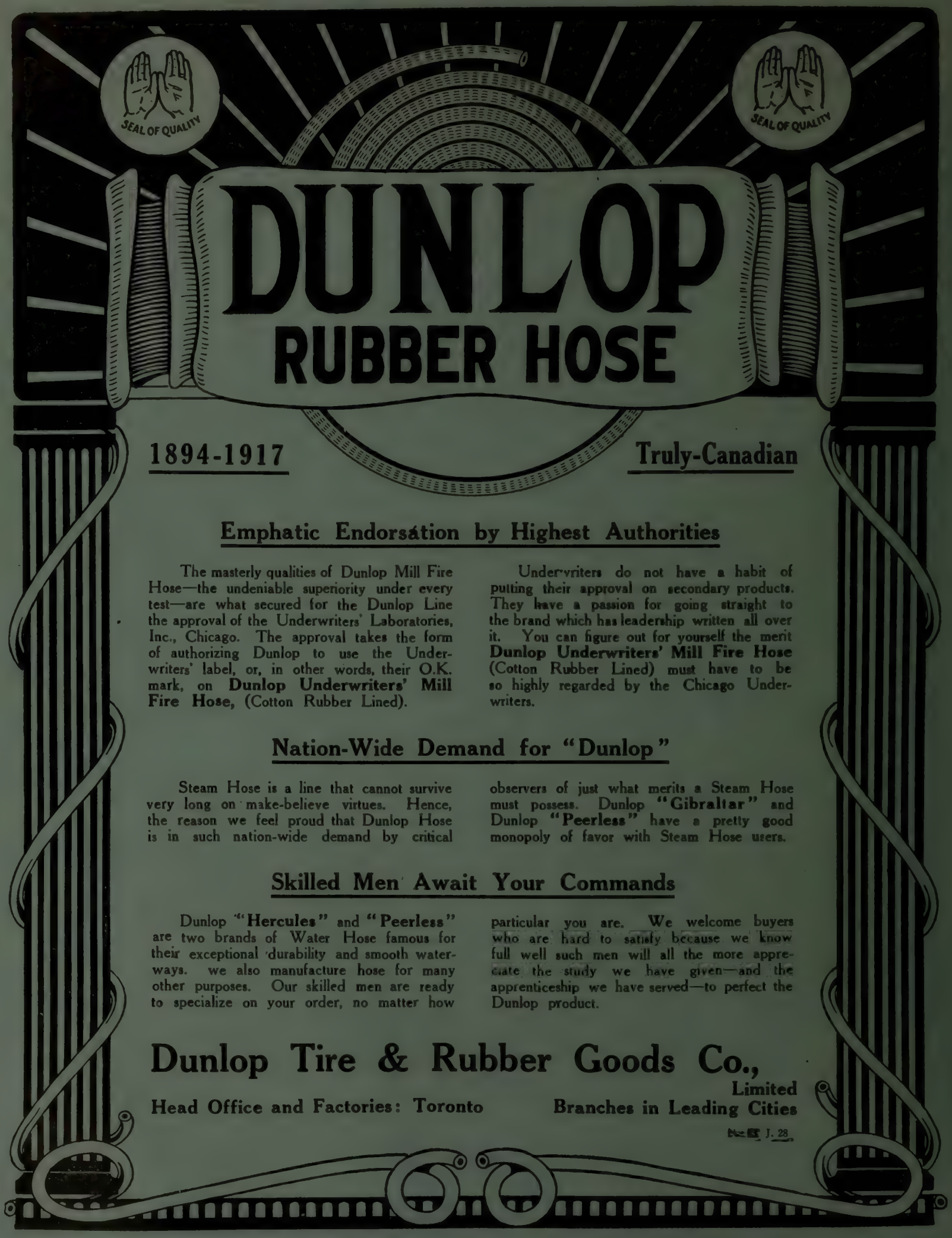

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RUBBER HOSE

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Emphatic Endorsation by Highest Authorities

The masterly qualities of Dunlop Mill Fire Hose—the undeniable superiority under every test—are what secured for the Dunlop Line the approval of the Underwriters' Laboratories, Inc., Chicago. The approval takes the form of authorizing Dunlop to use the Underwriters' label, or, in other words, their O.K. mark, on **Dunlop Underwriters' Mill Fire Hose,** (Cotton Rubber Lined).

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Nation-Wide Demand for "Dunlop"

Steam Hose is a line that cannot survive very long on make-believe virtues. Hence, the reason we feel proud that Dunlop Hose is in such nation-wide demand by critical observers of just what merits a Steam Hose must possess. Dunlop **"Gibraltar"** and Dunlop **"Peerless"** have a pretty good monopoly of favor with Steam Hose users.

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Dunlop **"Hercules"** and **"Peerless"** are two brands of Water Hose famous for their exceptional durability and smooth waterways. we also manufacture hose for many other purposes. Our skilled men are ready to specialize on your order, no matter how particular you are. We welcome buyers who are hard to satisfy because we know full well such men will all the more appreciate the study we have given—and the apprenticeship we have served—to perfect the Dunlop product.

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Head Office and Factories: Toronto **Branches in Leading Cities**

J. 28

SPRUCE

1916 SAWING—DRY STOCK

Merchantable		5th Quality	
2 x 4 x 10/16 -	50,000'	3 x 5 and up x 6/16' -	160,000'
2 x 5 and 6 x 10/16	60,000'		
2 x 7 x 10/16 -	100,000'		

1917 SAWING

Merchantable

1 x 3 x 10/16	2 x 4 x 8/16	3 x 6 x 10/16
1 x 4 "	2 x 5 "	3 x 7 "
1 x 5 "	2 x 6 "	3 x 8 "
1 x 6 "	2 x 7 "	3 x 9 "
1 x 7 and up	2 x 8 "	3 x 10 "
	2 x 9 and up	3 x 11 "

Mill Culls

1 x 3 and up x 6/16	2 x 4 and up x 6/16	3 x 6 and up x 6/16

Merchantable Spruce Lath 1½ x 4'

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Drummond Bldg. - Montreal, Que.

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Rough or Dressed

On account of the uncertainty of car and mill supply, we are offering only material that is in transit. We then know that we can deliver these cars when promised.

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Wire us your enquiries.

Cars Now in Transit:

Flooring
Ceiling
Rough Clear Fir, Kiln Dried
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Timbers
Shingles
Tank Stock
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George Gordon & Co.

Limited

Cache Bay - Ont.

Manufacturers of

RED and WHITE PINE

PLANING MILL **DRY KILN**

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

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Fassett, Que.

Snaps for Prompt Shipment

300,000 ft. 1 x 4 and up, No. 1 and 2 Mill Cull White Pine, stock all in.

At Fesserton

2 cars 1 x 8—10 to 12 inch Mill Cull White Pine.

At Waubaushene

1 car 1 x 8 and up, Mill Run Norway Pine.
25,000 ft. 2 x 6 Mill Run Norway Pine.
8,000 ft. 2 x 8 Mill Run Norway Pine.

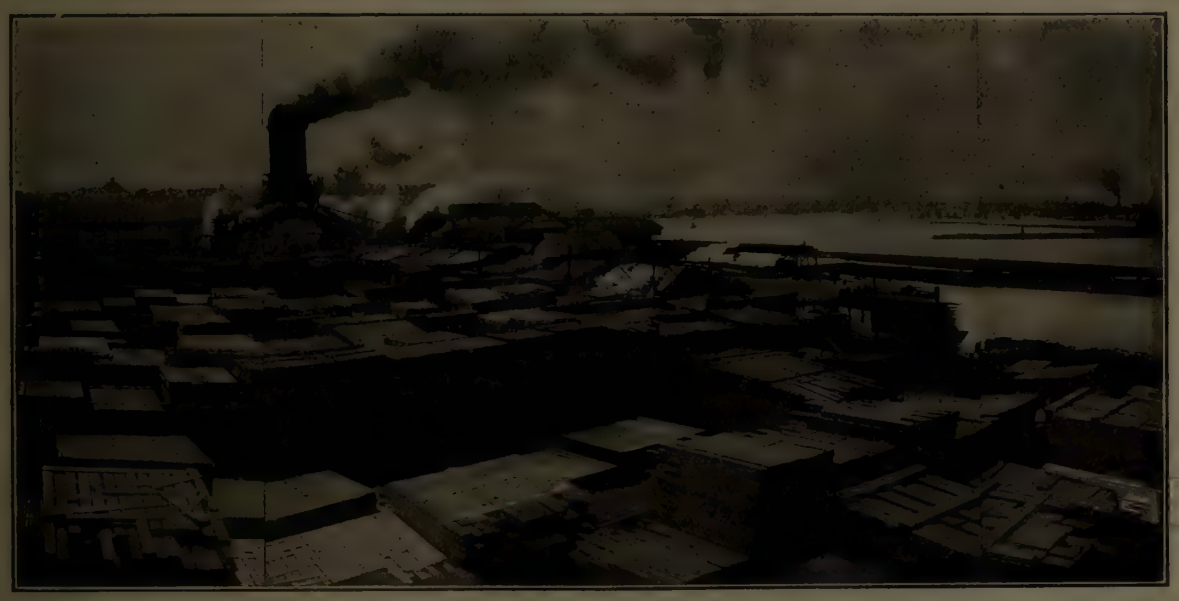
At Midland **Massey Stock**

1 car 1 x 4 10/16 Mill Run White Pine.
2 cars 1 x 6 10/16 Mill Run White Pine.
1 car 1 x 12 10/16 Mill Run White Pine.
1 car 1 x 10 No. 1 Mill Cull White Pine.
1 car 1 x 12 Mill Cull White Pine.
1 car 3x B. C. Shingles in Transit.

Write for Prices

The Long Lumber Company

Hamilton, Ont.



View of Yard and Fir Mill. Daily Capacity 200,000 ft.

Manufacturers of British Columbia FIR and CEDAR

Finish	Siding
Flooring	Finish
Ceiling	Ceiling
Siding	Mouldings
Mouldings	Shingles

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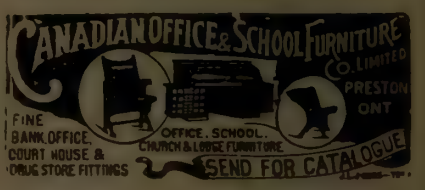

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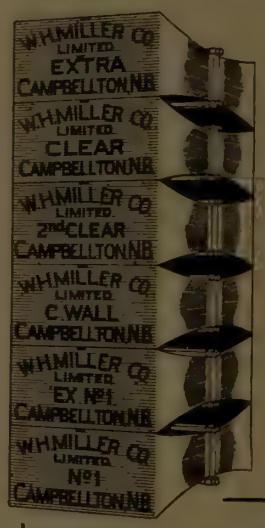

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Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster-General for Canada, for transmission as second-class matter.

Entered as second-class matter July 18th, 1914, at the Postoffice at Buffalo, N.Y., under the Act of Congress of March 3, 1879.

Vol. 37 **Toronto, August 15, 1917** **No. 16**

New Demurrage Rules Will Help Car Situation

The new demurrage rules which have been drawn up by the Board of Railway Commissioners for Canada, the chief features of which are published elsewhere in this issue, are of much importance to the lumber trade. Inasmuch as they are the result of a formal order by the Board, they will clear the air, and shippers and railway companies alike will know definitely where they stand. The order goes into effect on August 20th, and, according to its wording, is to continue in effect during the war. Briefly, the new rules have been purposely designed by the Board to speed up shipments by reducing the time during which freight cars are idle on account of various delays during loading and unloading. The principle of the rules is to let the shipper off easily when he is prompt in loading or unloading his cars, or even when he has been obliged, for one reason or another, to exceed the free time limit by a day or two; but as soon as he takes more than a reasonable time to load or unload, the demurrage charge against him commences to increase, and piles up to such an extent that it soon becomes far more profitable for him to use the utmost speed in releasing the cars than to be slow about it.

There are one or two important differences between the new rules and old ones. One day has been cut off the free time allowance in connection with shipments of lumber and coal. Formerly, three days' free time was permitted. Now only two days are allowed. Under the old rules which were in effect previous to January 1st, 1917, only two days' free time was allowed and then the charges were $1 for the first day, $1 for the second day, $3 for the third day and $5 for the fourth and each succeeding day. After May 30th the old rules were reverted to. After August 20th there will only be two days of free time, and on the third day a demurrage charge of $1 will be imposed. On the fourth day the charge will be $2, on the fifth day $3, on the sixth day $4, and on the seventh and each succeeding day $5.

It is plainly evident that the Board has desired to put into effect a set of rules which will reduce the delays in loading and unloading. The new rules unquestionably will have this effect, and, to that extent, shippers will be benefited, as their interests are closely affected by the ability of the railway companies to furnish cars. With fewer delays in loading and unloading, more cars will be available. The new order is to be commenced on this ground. Although lumber shippers naturally will be inclined to object to the reduction in the free time allowance, they stand to be considerably benefited by the greater number of cars they will be able to obtain under the new rules, and if a reasonable effort is made by all parties to co-operate in speeding up shipment, there will be much good come out of the new rules. A few lumbermen who have already expressed their opinions upon the change are inclined to take this view and to say that the new rules, with the exception of the increased charges and reduced free time are commendable, in fact are workable and good. They admit that the rules are likely to relieve the car shortage to an appreciable extent, without working much hardship upon those who seriously attempt to release their cars promptly.

Pulpwood's Increased Value Stimulating Fire Prevention

The great increase that has taken place lately in the value of pulpwood is responsible for quite a revolution in the general situation of the pulpwood industry and brings to light some interesting considerations. From two different sources we have recently received expressions of opinion upon this subject. Mr. R. O. Sweezey, who is well known to readers of the Canada Lumberman on account of his extensive experience in the lumber and pulpwood industries of northern Ontario and Quebec, writing to the Canada Lumberman recently, says:—"I have just returned from a trip in the north country, where I was interested to note that the high prices for pulpwood are acting as the best argument for conservation that has ever been put forth regarding Canadian forests. The settler no longer sets fire recklessly to his standing timber because he now gets a profit, not only upon his labor, but also upon the value of the timber as it stands. I trust that interference with prices of pulp and paper will not lower the price of wood sufficiently to cause the settler to revert to his former practice of burning his standing timber, instead of cutting and selling. This year the settler is receiving from $6.50 to $8 a cord for his rough wood at the railway. In former years he only received $3 a cord."

The situation as outlined by Mr. Sweezey is important, both in regard to its effect upon the pulpwood industry and because of its bearing upon the settlement problem in the north. In regard to the pulpwood industry, the situation is simply one of an economic nature relating chiefly to the problem of supply and demand. The settlement feature of the matter, however, has a much wider bearing, and while Mr. Sweezey is incliined to look upon it as a possible promoter of conservation, there is a danger connected with the situation which, if not handled cautiously and vigorously by provincial governments, may produce bad results. No doubt the settlers already in the country who cut and sell their pulpwood will be a far smaller fire risk than they have been in the past when they burned their timber, and it is possible that during the present summer the north country may escape the great conflagrations that have so frequently swept over it and have in practically all cases been caused by careless settlers.

The dangerous feature of the situation is that which relates to the land hunger of a certain class of individuals who have the reputation of taking out fraudulent homesteading permits so as to strip the country of its timber and then move elsewhere. This subject has been dealt with frequently in the Canada Lumberman, and so far as Ontario is concerned the last reference to it was a report of the remarks made by the Minister of Lands, Forests and Mines in reply to a deputation in November, 1916. The Hon. Mr. Ferguson then said that, so long as he was head of the Department, political influence would be of no avail in obtaining homsteading permits, or appointments to the Forest ranging staff of the department. Other provincial governments have laid down similar policies from time to time, and while we have no disposition to make statements either pro or con upon this subject at present, it is timely to bring it up because of the situation created by the high price of pulpwood.

That this situation is taken very seriously by those who are most

active in the preservation of Canadian forests is shown by an article in a recent issue of the Canadian Forestry Journal, which says:—"Until homesteading and timber licensing are completely removed from the vicious influence of political pull, various administrations will continue to play ducks and drakes with the public resources of land and timber.

"In violence to the legal regulations and every consideration of the public good, hundreds of "homesteading" applications are granted because of political pressure and only the lack of publicity for such transactions can present a general protest.

"None denies the right of a land-hungry citizen applying to his Government for a free grant. But in these days when spruce for pulpwood commands the high price of eight dollars a cord delivered at the railroad, it is significant how many persons are getting 'land hungry' and cannot be persuaded to take land that is not densely covered with pulp wood. Offer most of the applicants a homestead of cleared land, ready for the plow, and they would turn it down.

"It is understood that the Lands Department of the Government of New Brunswick is overloaded with 'Homestead' applications. Traditional practice in some parts of the Dominion has granted these requests as freely as they arrived. So-called settlers seeking some cheap and accessible timber, when the market is thriving, are allowed to take these generous slices out of a licensed area. Indifferent to the effects of fire, careless as to the fate of the main stand, they form one of the most dangerous menaces with which the protective staffs have to deal. Often the spruce lands are quite unfit for agriculture, nor has the settler in many instanc s any intention to try a permanent residence. He clean cuts the standing timber, leaves no provision for natural reproduction of trees, creates a fire hazard and finally moves off with some easy money.

"The straightforward policy is to refuse homesteading applications except for land definitely proven as agricultural and where it lies in sufficient volume to maintain a community and its social machinery. No citizen ought to be allowed to locate himself and family in a mere 'pocket' of good soil, isolated from schools, churches, and markets. Where applicants can be shown to be mere timber grafters, their cases should receive short shrift."

Anarchy in the Pacific Coast Industry

It is a little difficult for people living in eastern Canada to appreciate the proportions and the gravity of the industrial crisis that is developing on the Pacific Coast on account of the demands of the Industrial Workers of the World. About all that has been learned so far in eastern Canada is that there is a strike in progress among the employees in many of the saw and shingle mills of the coast and that the plants have been closed down. In ordinary times the declaration of a strike calls only for the consideration of the rights of the individuals immediately concerned. The inconvenience to the consumer has little bearing upon the result, and, the great body of the people take an interest in the affair only as a matter of news and discuss it so long as it is featured on the front pages of their daily newspapers. But there is something far more serious going on today on the Pacific Coast, which concerns not only employers and employees, but the whole nation and its efforts to furnish materials necessary for carrying on the war.

The Industrial Workers of the World have established for themselves a reputation for lawlessness and greed which ought to be put down ruthlessly, even in times of peace. Their great desire is to stir up trouble. They represent all that many of us have come to think is included in the name of anarchy. Their aim is to disturb and tear down the industrial fabric, and they impress their members to aid them by promises that their industrial situation will be improved in the process of destruction. Their method of procedure is that of anarchy in its essence. When they determine upon a certain set of demands that are to be made upon employers they issue an ultimatum, and when their orders are not complied with they strike. They make no use of arbitration or conciliation of any description. Simply, the employer has to accept the choice of compliance with their demands or a fight; and what a fight means against such unscrupulous opponents is becoming evident to the industries of the west coast today.

The agitators who are in control of this movement are inciting their members to acts of violence which can be dealt with only in one way. Their actions are treason in its most sinister form and need to be handled as such. They stop short of nothing which they imagine will help them in obtaining their end. Destruction of mills is their chief means of cowing employers. Today they are going still further. In the southwestern States they are making demands upon the agricultural community and threatening to withdraw labor from the fields at a time when the crops are ready to be harvested, and when the very life of the nation and the success of its efforts in the war depend upon the harvesting of all that has been produced. They are threatening to invade the great lumber producing industry of the southern States.

The arrogance of this body is leading them to extremes which must surely bring about their downfall. In Canada, we believe that the situation, if it reaches such a climax as it has already reached in the United States, will be dealt with as we have suggested above, and that those who are responsible for anything in the form of violence will be dealt with as traitors. We have seen enough of the results of the war in Canada to appreciate this point better probably than those across the line, and agitators in this country are not so likely to go to great extremes. If they do however, they must be taken in hand without delay and examples made of them which will put an end to all such treason.

The Industrial Workers of the World have made sufficient trouble in the western States to warrant the Canadian Government in stamping out their work in Canada at once, without waiting for an example from across the line. If the Government of the United States had already had the experience that the Canadian Government has had in connection with the war, there is no doubt that this organization would have been broken up long ago. The very fact that it has been treated leniently so far is adding to its arrogance. It has even gone so far as to send a telegraphic ultimatum to the President of the United States, threatening a general strike of miners and harvest workers if its demands are not complied with. The organization seems to have concluded that Democracy, instead of being the government of the people by the people, is the government of the people by the lawless few. Undoubtedly its course has been dictated to some extent by a false comparison between the situation which it has produced and that which was produced some time ago by ordinary industrial forces when the railway employees of the United States issued an ultimatum to Congress that if its demands were not complied with within a certain time they would call a strike that would paralyze the traffic of the country. The situation today, however, is very different from what it then was and the Government of the United States will be justified, in the minds of all who have the interests of the country at heart, in arresting the leaders of this industrial uprising and treating them as enemies of the country, trying them for treason and meeting out such punishment as the evidence warrants, even to the extent of the death penalty where it is shown that they mave been exciting members to violence or destruction.

As to the situation which will develop out of the strike from an industrial point of view, and its effect upon the markets, nothing definite can yet be said. Already a scarcity of British Columbia lumber and shingles is being felt in eastern Canada and west coast products are similarly scarce in the eastern States. The outcome, however, will depend entirely upon the vigor of the Government in dealing with the movement, for, apparently its leaders intend to go to the end of their tether and to cripple the producing activities of the western industry, or even to destroy its productiveness altogether, if they are permitted to do so.

White Pine's Peculiar Market Conditions

Without attempting to trace the market history of white pine lumber in Canada and the Northern States, it is possible to state in general terms that its advance in price for some years was coincident with its gradually increasing scarcity, and that this advance finally was checked by the entry into its markets of competing woods from the southern States and the Pacific coast, so that in late years its market price has not been regulated either by supply or demand. This situation is the subject of a short article which appeared recently in the Journal of Forestry, written by K. J. Braden, who draws attention particularly to the tax on the lumber consumer in the lake States which results from the cost of transportation. Some of Mr. Braden's points and figures are interesting. The growing scarcity of stumpage in the United States, he says, is emphasized in the steady increase in mill prices of lumber from 1900 to 1908. In 1900 the average mill price of thirty species of lumber was $11.13 per thousand feet. In 1908 this had increased to $15.37 per thousand feet, an advance of 38 per cent. in eight years. Some of the kinds of lumber and their increases in mill price were as follows:—White pine, 43.2; oak, 54.1; cedar, 65.3; western white pine, 54.9; walnut, 16; yellow poplar, 80.3; spruce, 44.2.

These advances in price, taken as a whole, indicate that the increasing use of wood substitutes cannot be expected to halt effectually the advance in wood prices, although it cannot be doubted that the increase would be greater in the absence of such substitutes. An analysis of the increases, however, furnishes evidence of competition between species. Yellow poplar and cedar, which have special uses for which it is difficult to substitute another species show the greatest advance in price. Walnut, which had already reached a very high price in 1900 shows a very small increase, and is evidently subject to the competition of cheaper woods. The comparatively small advance in white pine must be ascribed to its sale in competition with western and southern pines, rather than to any large amount available. The presence of all western and southern pines in the market throughout the lake States is taken to be a conclusive evidence of the scarcity of white pine stumpage. Twenty-five years ago, white pine controlled the market in this district and the price was dependent upon the cost of production and distribution. The price of stumpage advanced as the supply decreased, until the southern pines were able to replace it to a large extent. As yellow pine becomes less available the western species are gradually taking its place. Although these competing woods are no better suited than white pine for the purposes to which they are put, except for special use as construction timbers, their large available supply sets a value for white pine and limits its advance in price, so that the growing scarcity of white pine does not increase its price in proportion, but results in an increased demand for the competing woods.

Keeping these points in mind the writer then discusses the tax upon the consumer resulting from compulsory use of substitutes on which a heavy freight rate is necessary. Using the Minneapolis market as an example he states that the following are average rates per thousand feet from the different producing regions: Southern pine, $8; Douglas fir $11.25; western pine, $8.75; Idaho white pine, $8; northern pine, $1.40. Every thousand feet of western and southern pine received at Minneapolis, therefore, costs the consumer much more in freight charges than the same amount of lumber would if shipped from the northern pine producing region, and this excess may be fairly regarded as a premium paid to the railroads for the privilege of using certain kinds of lumber which are in most cases no better suited for the purpose than the white pine. For the different species the premium per thousand feet works out as follows:—Southern pine, $6.60; Douglas fir, $9.85; western pine, $7.35; Idaho white pine, $6.60.

While the object of the article is to point out that Minnesota might profitably place a property tax upon its people for forestry purposes, in order to develop a home-grown supply of pine, the article is chiefly interesting to Canadian readers because of the way in which it illustrates the cause underlying the fact that white pine has apparently been regulated by conditions quite apart from those prevailing in connection with other lumber stocks.

Editorial Short Lengths

The Canadian news print enquiry is held up, pending the report of Geoffrey Clarkson, of Toronto, who was the accountant selected to go through the books at the various news print plants to verify the statements of cost and profits submitted to Commissioner R. A. Pringle, K.C. He has about twenty expert "statisticians" on the job, and the work is proceeding as rapidly as possible. But it will be hampered considerably by the appointment of the new commission to investigate profits on foodstuffs. Mr. Clarkson has been made a member of this commission, and he will have to divide his time between this and the news print probe. George F. Henderson, K.C., one of the counsel for the manufacturers in the paper enquiry, is the chairman of the foodstuffs commission, so that his attention will also be detracted from the paper investigation for some time. It is not likely that a report from Mr. Clarkson will be received before the latter part of August, and it is expected that the commissioner will then ask for a further extension of the order-in-council fixing the price of news print to give him time to compile his report.

The Forestry Branch of the Department of Lands, Forests and Mines of the Province of Ontario has issued a placard to be posted throughout the forest areas of Ontario, the object of which is to reduce the number of forest fires. The placard is worded as follows:

"Look before you leave. See that your fire's out. Save your forest; you may want to camp again." The department has forwarded 25,000 of these cards to the chief rangers of Northern Ontario, who will see that they are posted in conspicuous places along canoe routes and roads in the mining and tourist country of the north. The card is 18 inches by 12 inches. The letters are black and printed on a yellow background and can be read without difficulty at a distance of 50 yards. The cards are being distributed in order to win the co-operation of campers and others in order that disastrous fires may be avoided.

This year owners of lumber districts are required to pay a tax of one cent an acre to the government for expenses of guarding against fire.

The Department has also prepared a number of notices printed in large black type upon white linen which will be attached to trees, camp buildings, etc., throughout the north country. One of these notices is worded as follows:—"Your business and pleasure here will be injured by forest fires. Put your camp fires out. Do not drop lighted matches or burning tobacco. Big fires come from small ones. Penalty up to $50. Report fires to ———— Fire Ranger ———— address." Another of the linen notices is worded as follows:—"Do not burn your slash without a permit from a fire ranger———— Fire Ranger ————Address." The latter notice will be posted up in logging districts, in order to warn bush operators against the great danger of indiscriminate slash burning.

A despatch from Great Britain states that the government of Sweden has lifted the embargo on the shipment of chemical pulp from that country to England. This embargo had been imposed in retaliation for the embargo on the shipments of coal and other commodities from England to Sweden. It is not thought that the removal of the embargo will have any considerable effect upon trade, as there is a serious shortage of vessels and such as are available are being loaded with more important and valuable cargoes. England, moreover, permits the importation of chemical pulp only to the extent of one-quarter of the quantity imported in 1914.

New Rules Ordered for Car Demurrage

First Two Days Free; One Dollar for Third Day; Two, Three and Four Dollars for Succeeding Days; Five Dollars for Seventh and Following Days

Judgment has been given by the Board of Railway Commissioners for Canada in the matter of the application of the railway companies for approval of the revised code of car demurrage rules. The judgment is signed by the chief commissioner, Sir H. L. Drayton, and agreed to by the other commissioners. It goes into effect on August 20. Great interest was taken in this matter by shippers and railway companies, and the board held hearings at Victoria, Vancouver, Nelson, B.C.; Calgary, Regina, Edmonton, Saskatoon, Winnipeg, Fort William, Toronto, Montreal, and Ottawa. The judgment is given in the form of a consideration of the proposed rules, one by one, and a statement as to whether they are to be adopted or altered. The new rules, in the form in which they will now be effective, include the following:

Notification.—(a) Notice shall be sent or given consignee by carriers' agent in writing, or as otherwise agreed to in writing by carrier and consignee, with all despatch after arrival of car and billing; such notice to contain point of shipment, car initials and number, and the contents, also the initials and number of the original car if transhipped in transit. If notice is mailed, consignee shall be held to have been notified at 7 o'clock a.m. following the date of mailing.

The carrier shall notify the consignee or his carter on application where his car has been placed for unloading. Any time within the free time allowance lost to the consignee in so doing for which the carrier is responsible shall be added to the free time allowance.

(b) Delivery of cars upon private sidings or industrial interchange tracks shall constitute notification thereof to consignee. If such delivery cannot be made owing to such tracks being fully occupied, or from any other cause beyond the control of the carrier, written notice of readiness so as to deliver shall be given, and shall constitute notification to the consignee for the purposes of these rules, in which case the free time shall be computed from 7 a.m. of the first following day.

(c) In all cases where notice is required, the removal of any part of the contents of the car by consignee shall be considered notice thereof.

Free Time Allowance.—(a) Twenty-four hours (one day) after notice of arrival (exclusive of Sundays and legal holidays) will be allowed for any or all of the following purposes, if necessary:

1. For clearing customs.
2. In the case of consignees not served by private sidings or industrial interchange tracks, to give orders for special placement.
3. For reconsignment or reshipment in same car.
4. When cars are held in transit for inspection or grading; stopped in transit to complete loading, to partly unload, or to partly unload or partly reload, when such privilege of stopping in transit is allowed in the tariffs of the carriers.
5. If the 24 hours allowed for the above-mentioned purposes are exceeded, demurrage shall be charged.

(b) Forty-eight hours (two days) free time (exclusive of Sundays and legal holidays) will be allowed for loading or unloading all commodities.

Exceptions.—Five days' free time shall be allowed at Montreal and at tidewater ports for unloading lumber and hay for export.

Manufacturers, lumbermen, miners, contractors, and others who have their own motive power and handle cars for themselves or others, shall be granted additional allowance of the time necessary for them to do the switching to and from the designated interchange tracks, not to exceed 24 hours.

Computing Time.—(a) On cars held for loading, time will be computed from the first 7 a.m. after placement until loading is completed, and proper billing instructions furnished.

(b) On cars held for disposal, time will be computed from the first 7 a.m. after the day on which notice of arrival is sent, or given to the consignee.

(c) On cars held for unloading, time will be computed from the first 7 a.m. following placement on public delivery tracks, provided notice of arrival has been sent, or given to the consignee.

(d) On cars to be unloaded on private delivery tracks, time will be computed from the first 7 a.m. after actual or constructive placement on such tracks.

(e) On cars to be loaded or unloaded on tracks of manufacturers, lumbermen, miners, contractors, or others, who have their own motive power and handle cars for themselves or others, time will be computed from the first 7 a.m. following actual or constructive placement on the interchange tracks until returned thereto. Cars returned loaded will not be recorded released until billing instructions and other necessary data furnished.

(f) When empty cars are placed for loading on orders, and are not used, demurrage will be charged from the first 7 a.m. after placement until released without any free time allowance.

(g) When an empty foreign car is placed for loading via a specific route so as to protect ownership of car, according to Car Service Rules, and same is not so loaded, demurrage will be charged until car is unloaded, without any free time allowance.

(h) Time lost to the shipper or consignee through switching of cars, or any other cause for which the railway company is responsible, shall be added to the free time allowance.

(i) In computing free time or demurrage time, Sundays and legal holidays will be excluded. The exemption for holidays does not include half-holidays.

Weather Interference.—If wet or inclement weather, according to local conditions, renders loading or unloading impracticable during business hours, or exposes the goods to damage, the free time allowance shall be extended so as to give the full free time of suitable weather. But if the cars are not loaded or unloaded within the first 48 hours of suitable weather no additional free time shall be allowed.

Bunching.—(a) Cars for loading.—When, by reason of delay or irregularity of the carrier in filling orders, cars are bunched and placed for loading in accumulated numbers in excess of daily orders, the shipper shall be allowed such free time for loading as he would have been entitled to had the cars been placed for loading as ordered.

(b) Cars for unloading or reconsigning.—When, as the result of the act of neglect of any carrier, cars destined for one consignee at one point are bunched at originating point, in transit, or at destination, and delivered by the carrier line in accumulated numbers in excess of daily shipments, the consignee shall be allowed such free time as he would have been entitled to had the cars been delivered in accordance with the daily rate of shipment. Claim to be presented to carrier's agent within 15 days.

Placement.—(a) "Actual placement" is made when a car is placed in an accessible position for loading or unloading.

(b) Deilvery of cars to private sidings or industrial interchange tracks shall be considered to have been made when such cars have been placed thereon, or would have been placed but for some condition for which the consignee in writing is responsible. When cars cannot be so placed, the carrier's agent shall notify the consignee that he has been unable to deliver cars because of the condition of the private siding, or interchange tracks, or because of other conditions attributable to the consignee. This will be considered "constructive placement." This will apply to such cars which consignees located on switching line are unable to receive, and which, for that reason, the switching line is unable to receive from the carrier line. The carrier line will advise the switching line of point of shipment, car initials and number, contents, and consignee, and, if transferred in trasit, the initials and number of the original car. The switching line will notify consignee and put such cars under constructive placement.

(c) When delivery cannot be made on specially-designated public delivery tracks, on account of such tracks being fully occupied, or from any other cause beyond the control of the carrier, the carrier shall send or give the consignee notice in writing, or as otherwise agreed to by carrier and consignee, of its intention to make delivery at the nearest point available, to the consignee, naming the point. Such delivery shall be made, unless the consignee shall before delivery indicate a preferred available point, in which case the preferred delivery shall be made.

Customs or Inspection Delays.—Demurrage charges shall not be collected from the consignee for any delays for which government or railway officials may be responsible.

Charge.—After the expiration of the free time allowed demurrage shall be charged during the war on the following scale:

First and second days to be free.

For the third day a charge of $1 to be made.

For the fourth day a charge of $2 to be made.

For the fifth day a charge of $3 to be made.

For the sixth day a charge of $4 to be made.

For the seventh day and all days thereafter a charge of $5 per day to be made.

Non-payment.—If payment of demurrage charges properly due on cars held on public delivery tracks be refused, delivery of only the car or cars on which such charges are due shall be withheld, by means of sealing or locking, or by placing where such cars shall not be accessible.

If the owner or users of private tracks, or the owners of industrial tracks, refuse to pay any charges which may already be due, delivery of cars to such sidings or tracks shall be suspended, and delivery shall be made on any availabl public team track until such charges have been paid.

Chief Commissioner's Comment on Changes

In the course of the judgment the chief commissioner comments upon each rule and the changes which he has made in them. Some of

these comments are important and interesting to lumbermen. Among the comments made were the following:

"Consignees are entitled to information as to the exact spotting of their cars. I am of opinion that if there is any delay in giving this information, for which the carrier is responsible, the time lost should be added to free time allowance." This is provided for in Rule 2, Section A, of the new rules, which is one of the sections amended by the judgment.

"The adoption of the free time allowance rule proposed by the railways would work a very radical change, in that free time allowed for all public team-track delivery would be shortened by 24 hours. The rule submitted is, in effect, the American rule; . . . conditions in Canada do not permit the adoption of this proposed rule. While the C.P.R. can place cars on team-track without first receiving any specific order, owing to the fact that their terminals are arranged in such a manner as to permit this, the Grand Trunk cannot. . . . The 24 hours' time now allowed, in my view, must be continued. It is impracticable to have one rule for the C.P.R. and another rule for the G.T.R.; and the general conditions forbid the adoption of the rule, as submitted, in Canada in this regard. . . . In my view, cars would not be the more speedily released. The only effect would be to enable the railways to exact further tolls from the public. On the other hand, the adoption of the rule would be prone to add to existing congestion."

"If placement orders are held over until after the first 24 hours, although the unloading itself may not be delayed, terminal congestion is, nevertheless, increased, as a fresh lot of cars have been brought into the terminal in the second 24 hours, necessitating more switching and more shunting."

"Cars cannot be unloaded either on Sundays or on legal holidays. To include them in demurrage time is merely adding an extra penalty for an ordinary default. There can be no justification for it. Ordinary default will be fully covered by the scale of demurrage to be adopted."

"There are cases, and always will be cases, where the greatest diligence is sometimes attended with delay. The man who is trying to do his best ought not to be unduly penalized. I agree that the greatest number of delays to cars, of necessity, occur on the day first after the free time; but I am firmly convinced that the delays which are really unnecessary, many instances of which have been brought before the board, are delays which extend until well beyond this first day and for a week and more afterwards. . . . The holding of a car on the third day ought not to be considered in the light of a penalty. Some charge, of course, has to be made, but to my mind there is no doubt that a heavier charge ought to be made for a delay on the sixth day than for a delay on the third. The object, as I see it, is not to penalize the man who is desiring to do business as quickly as he can, but to penalize the man who is persistently holding cars over the prescribed free period or turning them into temporary warehouses."

"The demurrage tariff included in the judgment ought to release cars quickly. Under it the car held for seven days would be subject to a charge of $15, as against $10 under the American tariff, although for three days, which is the period covering most cars, the charge would be but $1, as against $2 in the States, and for four days $3, as against $4."

"It may be thought that the tariff is specially severe and ought never to be applied. I am confident that, with diligence, all cars can be unloaded—if not within three, certainly within four days; and, if by reason of some special circumstance, the consignees may find themselves in an unfortunate position, it is infinitely better that the individual should suffer rather than the whole. Traffic must be speeded up, and coal must be got into the country."

The judgment concludes with a discussion of the problems of reciprocal and average demurrage, and states that the congestion of last winter worked similar and perhaps greater loss to the railway companies than that to shippers and consignees. "In Ontario, as a result of the congestion in February," the judgment says, "the freight business of the Canadian Pacific was actually 15.58 per cent. less than the business of February, 1916, while the Grand Trunk's decrease amounted to no less than 39.37 per cent. The decreases in the Quebec district were greater, the Canadian Pacific's being 25.82 per cent. and the Grand Trunk's 48.5 per cent.

These losses occurred at a time when a tremendous amount of freight was offered both systems, yet the actual performance of the companies resulted in loss of freight earnings. The possible loss to the railway companies under reciprocal demurrage, the judgment says, "would be entirely infinitesimal as compared to the actual losses incurred. The incentive to service which a demurrage penalty would afford would be indeed small as compared to the incentive the companies would already be under."

The proper time to deal with the questions of reciprocal and average demurrage was not at present. They ought to be left open for consideration by the board with open mind, after the war, and when conditions are more normal. In conclusion, the judgment states that the board will endeavor to ascertain whether the adoption of reciprocal demurrage or average demurrage has worked real benefit in places where they have been tried.

Details of English Embargo Relaxation

A cablegram received recently in regard to the relaxation of restrictions on the import of timber into Great Britain from North America outlines the situation as follows:—

(1) Neutral sailers: Timber may be imported from Canada and the United States under provisions of an import license. (2) Deck loads: General license granted by Department of Import Restrictions for import of timber as deck cargo from Canada and the United States. In this case unnecessary for importers to apply for licenses. (3) Prices: The order which limits prices of imported soft wood to those current during last week of January, 1917, is not to apply to timber imported from Canada and the United States after July 19, 1917. Timber so imported may be sold by importers at cost price delivered to store, plus 10 per cent. provided price so calculated does not exceed by one-third the price current during last week of January, 1917, for soft wood of similar quality in same locality.

Northcliffe Paper Going to U. S. Consumers

The American Newspaper Publishers' Association, through its paper committee, has concluded negotiations with the Lord Northcliffe mill interests, and has contracted for the mills' entire output in Newfoundland, to be sold to United States publishers, without contract, at prices claimed to be lower than the market quotations. A. G. McIntyre, of the paper committee, states that delivery of the paper to publishers can be made within a short time.

"We can practically guarantee delivery from Newfoundland to seaboard in five days," he says. "The reason for this expedition is that we have the necessary ships to transport the paper. It would have been a much more difficult undertaking if this were not the case."

The criticism has been made that only paper in a 69½ size, or the size of the London Daily Mail, can be furnished. "This," Mr. McIntyre says, "is not the case. The Northcliffe plant can furnish any of the standard American sizes. At the present time we have approximately 15,000 tons of news print stored up at Newfoundland, and, of course, some of this is in sizes that cannot be utilized by American publishers with their present mechanical equipment. The production of the mills, we estimate, will be about 210 tons per day."

B. C. Forest Fires Take Toll of Life

According to the latest reports received from British Columbia, most of the forest fires have been got under control, but not before some of them resulted in loss of life and extensive loss of property.

Eight men are known to have perished in a fire that swept the Spruce River Valley, fifteen miles north of Fernie. Sixty-odd men and about 20 teams were trapped in one of the Elk Lumber Company's camps situated in a blind valley and the loss of life occurred at this point. A large quantity of logs, the logging railway, the camp building and equipment, the supplies and a number of horses were destroyed.

Forest fires were reported in the upper valley of the Kootenay River, about 30 miles west of Cranbrook.

Other fires were reported in the Creston Valley, in the Flathead Valley, near Corbin and near Trail, B.C., in addition to a number of smaller fires at other points.

No Fifteen Per Cent Rate Advance in U. S.

The Interstate Commerce Commission of the United States have postponed until October 1st, 1918, the proposed 15 per cent, increase in freight rates. The commission announced: "We are led to the conclusion that no condition of emergency exists as to the Western and Southwestern carriers, which would justify an increase in the rates to become effective."

The commission declared its willingness to meet any situation which may develop in which the railroads' fears are realized.

Shipbuilding Superintendent

Some responsible parties desire to get in touch with a capable superintendent to take charge of the building of small steamships for a company which is going into this work in France. There would be a splendid opening for a man with boat-building experience, speaking both languages. Further information by addressing "Ship-Builder," care of "Canada Lumberman," Toronto.

Wooden Shingles Invariably the Best

Comparison with Composition Products Shows them to be Superior—a Useful Analysis for Retailers to Bear in Mind

The campaign waged by manufacturers of various kinds of patent roofings, in order to gain as much of the market belonging to the wooden shingle as possible, has made remarkable progress, chiefly on account of the persistency of those who are behind it. Handled upon the comparative merits of the different roofing materials this campaign would not be able to show the results it has shown, but the lack of knowledge on the part of the consumer has been capitalized heavily by the promoters of this campaign and their efforts have been all the more fruitful because shingle manufacturers and salesmen have not been presenting their side of the case in anything like the way they should.

A definite instance of this fact is afforded by one of the methods of comparison of which the patent roofing men are particularly fond. They will compare the cost of their roofings by the square with the cost of wood shingles by the thousand, which is entirely misleading, as 1,000 shingles will cover considerably more than the square, which means 100 square feet. For instance, taking the average width of shingles as 4 in., the various lengths of exposure will cover as follows:

4 in. exposure will cover 111 1/9 square feet.
4½ in. exposure will cover 125 square feet.
5 in. exposure will cover 139 7/12 square feet.

It is not probable that this point has been explained to many consumers who were in doubt as to which kind of roof they would use. It is very important that retailers should keep this point in mind and always see that the comparison is made on a proper basis. The best way in which to bring the matter home forcibly to the prospective customer is to let him know how many shingles will be required to cover 100 square feet, so that he may compare these figures with the figures for composition roofing. A little calculation from the figures given above shows that the number of shingles required to cover 100 square feet for the various lengths of exposure is as follows:

4 in. exposure—900 shingles required.
4½ in. exposure—800 shingles required.
5 in. exposure—720 shingles required.

The nails required for laying these shingles will be:

4 lbs. 3 d coarse galvanized wire nails.
5 lbs. 3 d iron cut nails.
5 lbs. 3 d cut zinc nails.

The roof sheathing required will be as follows, according to specification:—

1 x 4 spaced 2 in. apart 66 2/3 ft. to cover 100 square feet.
1 x 6 spaced 2 in. apart 75 ft. to cover 100 square feet.
1 x 8 spaced 2 in. apart 80 ft. to cover 100 square feet.

With the above information an example may be worked out showing the comparative costs of shingles and composition roofing to cover 100 square feet. Based upon a 4½ in. exposure for the shingle roof, the comparison is as follows:—

	Clears 5/2 at $6.00 per M.	Standard 5/2 at $4.00 per M.	Sound butts at $3.00 per M.
800 shingles	4.80	3.20	2.40
75 ft. 1x6 No. 2 roof sheathing 2 in. apart at $30	2.25	2.25	2.25
4 lbs. 3 d wire shingle nails at 5c.	.20	.20	.20
Total	$7.25	$5.65	$4.85

Composition Shingles

	Average quality	Better quality
1 square composition shingles	$6.00	$8.00
100 ft. 1 x 6 or 8 No. 2 sheathing laid solid at $30	3.00	3.00
4 lbs. nails at 5c.	.20	.20
Total per square for materials	$9.20	$11.20

Composition Roofing

1 square, including nails and cement, at $3.00	$3.00
116 sq. ft. 1 x 6 T & G or S & L No. 1 grade at $35.00	4.06
Total per square for materials	$7.06

The figures shown above were prepared by Mr. H. R. Isherwood, manager of the Retail Department of the National Lumber Manufacturers' Association and are based upon extra Star A, Star white cedar, or average quality of composition shingles, costing the dealer $4.50 delivered and 25 per cent. profit on selling price for dealer's profit. Other dealers who want to apply the comparison to their own cases can easily do so by using their selling price instead of the one mentioned.

No allowance has been made for waste in wood or composition shingles, as experience shows that the waste is practically the same in all cases.

Summing up the arguments for wood shingles, Mr. Isherwood states them as follows:—

Their history shows their durability. They are past the experimental stage, while composition shingles have been in use only a short time and still are experimental.

Statistics prove that the lasting qualities of wood shingles are greater than those of any other known roofing material when applied to a roof of proper pitch with proper nails.

The application of wooden shingles is not affected by cold, while composition roofing or shingles cannot be applied satisfactorily in cold weather. Wooden shingles are easy and clean to apply. They are adapted to shingle stains of any color. The stains can be applied at any time. The shingles hold their colors. The color effects can be renewed at any time and the colors applied to wood are most attractive.

Wood shingles do not attract heat or cold. The building with a wood shingle roof is cooler in summer and warmer in winter than other roofs.

A roof with a wooden shingle looks better than any other and it lasts longest.

Gets Out Among His Customers

A retailer who wants to get all the business possible nowadays has to go after it in every possible manner. It will not come to him naturally like it used to years ago. Initiative and energy on the part of yard managers count for a great deal under modern trade conditions; in fact, they make all the difference between success and failure. Just what to do in the way of working up retail yard trade is a problem which is difficult for some men to solve, but which other men are able to handle as a matter of natural ability. The way in which a successful manager tackles his own particular problems in a yard located in Iowa is told in a letter written by him to the Missippi Valley Lumberman. This manager tells of his work as follows:—

We are making special effort to sell silos, granaries, and in fact everything that can be built of wood and cement.

We have made it a practice to go out among our customers to talk new buildings and repairs and have found that this leads us to many talks that have helped us with our customers in many ways.

It has also been a great help to quote prices whenever we could on completed buildings and finished jobs. One thing that every lumber-

It's Not Hopeless

Grant that conditions in any given centre or in any stated community are demoralized; that lumber is being sold at cost, in many instances below cost; that there are among the dealers in that centre or that community, at least one of each of the types mentioned; that the situation as it exists appears hopeless; that your competitors have been perfectly willing to let one or two of you who are broader minded than the rest, carry the entire burden of attempting to work order out of chaos, year after year, while sitting idly by or even contributing by their actions to the process of tearing down what you have built up in the way of co-operative spirit; acting the part of both a sponge and a clam at the one time, i.e., soaking up everything that comes their way but giving nothing out in turn, until you have become disgusted and are about ready to quit. Your situation is not hopeless. On the contrary it can be remedied as easily as have been other ones throughout the country. But before it can be remedied you must know among yourselves what it costs to handle a thousand feet of lumber; a thousand lath, a thousand shingles; a hundred dollars' worth of mill-work. Not a guess but an accurate knowledge of these costs. Figured, not as each of you are now figuring them in the conduct of your individual business (I take it for granted that you are all figuring them) but figured along the most approved lines.—I. B. Hanks.

man should do is to get away from quoting lumber by the thousand feet.

We have found it a very good plan to keep an up-to-date set, or sets of plan books, and to invite the public to use them to get away from the difficulties in building where the parties are not familiar with the work. We have heard quite a lot of the high price talk but can always meet it by showing the farmer how much more material he can buy now with a bushel of grain or potatoes or even with "Mr. Porker," than he could before the prices had advanced.

Collection is where a good many of us have the weak heart, but collections must be pushed and the harder they are gone after, I believe, the better. Always try to get a definite date of settlement. Then the party expects to hear from you at this time and generally is ready to meet the statement. It also helps in making your customers become cash customers, and how we all like to see the cash customer come in. I have seen dealers who must have had a grudge against cash sales or wanted to cut their own throat. Some will advertise that they make a discount for cash and then will forget to give it to the customer when he comes in and pays cash for a small bill unless they are reminded of it. They will then come across with the discount and the excuse that they forgot it, as it was such a small amount. I believe that the discount on cash sales is one of the great helps to stimulate cash sales and that a party who will hang up a discount for cash sign and not be willing to stick to it shows his customers how small a soul he has.

Such a practice will kill cash sales as quickly as anything for you. Your cash customer will say, "well, if that is the way I get my discount I'll just have him charge it next time."

I believe in cash discounts and in living up to them, for really I believe that it is the best way to get a cash customer and about the only way to keep him with you.

Advertising we'll all agree is of the greatest importance to any business. Always keep the public familiar with the business you are representing and they will associate your name with their wants. Keep them posted on what you can do for them. Be ready to help any one with a difficult problem in regard to your line of business, and for goodness sake don't put him off. Treat him as you would like to have someone treat you if you were in his place. We have had good success with out up-to-date plan books and specifications in helping our customers and in giving them the idea that they really wanted. Advertising by circular letter is one of the best ways that I know of. To make your letters as personal as you can, try and make the customer who is to get your letter believe that you are right there with him and are having a personal heart to heart talk—it pays.

Another point—a letter that may not appeal to some business men, as it will take some time and in a good many instances some digging to find out what they want, is when you hear of a party who is looking for information on no matter what subject. If it is possible for you to get hold of anything interesting on it, put it in a personal letter to him and just wait the results, no matter if it is fishing, hunting or if it is some trip that he may be talking of taking and wondering what the expenses will be, what he will find after he gets there; and if it is good and your man has a good time, you know the rest.

Farmers will Have Money

Looking at things as they are now and what they promise to be, it seems to be a foregone conclusion that the farmers are going to receive more money for their products this year than ever before in the history of this country, says C. H. Ketridge, in the Mississippi Valley Lumberman. The very high prices of last year for grain did not prevail until the bulk of the small grain had passed out of the farmers' hands and only a compartive few who were able to hold in storage received the top-notch prices. But this year it will be different, for the government will insure the farmers getting at least $1.50 a bushel for wheat and corresponding prices for other grain. This, with the extraordinary big prices for stock, will put a tremendous amount of money at the disposal of the farmers and you can safely rely on it, too, that like everybody else, they are going to spend it for one thing or another. And it will be the lumbermen's own fault if they don't get a good share in the spending.

When people come in possession of more money than they have been used to having, it burns in the pockets of the great majority of them till they spend it for something they have wanted and had to go without for lack of means to buy it. It may be in the nature of luxuries or the necessities as the case may be. Usually, however, a good deal is spent for what is not necessary. There is many a farmer's wife who years ago made up her mind she was going to have a hardwood floor just like the one she saw in her sister's house when visiting in the city. She has got tired of scrubbing the old worn pine floor, and now that John is going to have a lot of money for his crops she is going to have a nice shiny oak floor and a Turkish rug to cover it. If it is not this, it perhaps is a built-in china closet or a swell looking mantel. Anyway, she is going to have something done in fixing up the interior of the house now they can afford it. Now, with that sort of feeling out among the farmers' wives, you lumber dealers are not onto your job unless you recognize it and make a campaign for cultivating this feeling that, as sure as you live, exists in the mind of every farmer's wife who has not got these or the other things wanted for the improvement of the home and which you have got for sale or can get for her.

Put together some of your old time oak flooring in a sample of about 12 x 14 inches in size. Have it finished and polished till it shines. Take it out some day and call at some of the farm houses. Show it to the women folks and tell them just what it will cost for covering the old floor in the best room. Even though you may not make a sale you will set them to thinking about it, and that means the creating of a desire to have it. The chances are also there will be a discussion over it with "John," and the probability is the woman will have her way in the matter, as all women do when they set their heads on getting a certain thing they want.

You know how it is yourself, when you get a raise in salary or have had a good year's trade, your wife will suggest something she would like to have for the house that she had wanted though they couldn't afford before, but with a larger income, she wants them, and you know what that means. Give a good deal of your attention and selling talk to the farm women folks this year.

Decreased Pulpwood and Woodpulp Shipments by T. & N.O.

Pulpwood shipments were made over the Temiskaming and Northern Ontario Railway, during June, 1917, to Merritton, Thorold, Toronto, Georgetown, Ottawa, Ont.; Niagara Falls, Watertown Carthage, Norfolk, N.Y.; Johnsonburg, Pa.; Port Huron, Grand Rapids, Mich., and Appleton, Wis., as follows:—

June 1st to 7th	1,385 cords
June 8th to 14th	1,972 cords
June 15th to 21st	1,958 cords
June 22nd to 30th	3,382 cords
	8,697 cords

This is a decrease of 3,973 cords from preceding month or 31.4%.

Woodpulp and paper shipments were as follows:—

	Woodpulp	Paper
June 1st to 7th	147 tons	1,085 tons
June 8th to 14th	406 tons	1,198 tons
June 15th to 21st	204 tons	1,547 tons
June 22nd to 30th	428 tons	2,132 tons
	1,185 tons	5,962 tons

This represents a decrease on woodpulp shipments of 752 tons or 39%, and an increase in paper shipments of 371 tons or 6.6%.

Shortage of Railway Wagon Timber

Some of the most important railway wagon building concerns in the United Kingdom are located in the midland counties, and all are finding it impossible to execute the numerous orders on hand. In conversation with one firm, it was ascertained that there is a serious shortage of the heavy timbers used in wagon construction, and there appears to be no prospect of easing the situation. Many cargoes of timber have been sunk, and the difficulty with which shipping companies are contending, naturally react upon manufacturing industries dependent upon incoming cargoes for supplies. As far as is practicable, British timber is being utilized, but so much of it is "wet" that industries in which "dry" timber is indispensable are very much hampered.

John P. Mosher Visiting Maritime Mills

Mr. John P. Mosher, of South Maitland, Nova Scotia, buyer in the Canadian market for L. N. Godfrey Company, of Boston and New York, U.S.A., will make a trip among the mills in Nova Scotia and New Brunswick during the next few days in the interests of his American clients. Mr. Mosher is a native of South Maitland and is very well known in Canada, where he has been travelling for years in the interests of his lumber trade. Mr. Mosher is now located for a few days in Halifax, supervising the loading of vessels in the interests of L. N. Godfrey Company, who are large buyers of Canadian spruce, hemlock, lath and shingles.

Mr. R. D. Hyde, secretary of the Shingle Agency of British Columbia, has resigned, in order to accept a position as sales manager of the Huntting-Merritt Lumber Company, Limited, Vancouver, B.C. His resignation takes effect on August 1st.

Methods of Piling Lumber for Drying

How to Construct Piles so as to Prevent Injury to Stocks from Moisture, Dirt, Warping, Stain, etc.—Endwise and Sidewise Stacks

"The Seasoning of Wood" is the title of a bulletin (No. 552) which has been issued by the United States Forest Service. The bulletin was prepared by H. S. Betts, and contains much that is interesting to lumbermen. In the section dealing with air seasoning, it says:—

Sawed lumber generally is dried by being piled in stacks with air spaces between the boards. In forming the stacks the boards usually are laid flat, with strips called stickers between courses or layers. A space also is left between each board in a layer and the adjacent board to provide for the circulation of air throughout the stack. Flat or horizontal piling may be of two kinds: (a) With the ends of the boards toward the alley-sidewise piling. The accompanying diagrams illustrate the two methods. The stocks are arranged to slope from front to rear, and to lean forward so that water dripping from the top falls to the ground without trickling down over the courses below. With either method of piling the stacks should be so located in the yard that the prevailing winds blow through them rather than against the ends.

Most lumber manufacturers and dealers use the endwise method of piling. A number, however, have adopted the sidewise method, which has certain advantages in the matter of air circulation. In endwise piling the stickers obstruct the passage of air from back to front of a course, while in sidewise piling the passages from front to rear are clear. Water which forces its way into the pile is more efficiently drained in sidewise piling, and the likelihood of sticker rot and discoloration due to the accumulation of moisture, dust, and dirt against the stickers is lessened.

The bottom boards in a stack rest on sticks, which in turn rest on foundations, preferably of stone, cement, or metal. Pieces containing rot should never be used for foundation timbers or skids, or allowed to remain in the pile. The vicinity of the pile should be kept clear of weeds.

The use of cement and metal foundations is especially feasible in retail lumber yards and in those maintained by wood-using factories. In retail yards, where economy in space often is the essential thing, the piles are high and a particular space usually is allotted to each class of species of lumber. In factory yards lumber often is held for a number of years before being used. In such cases the frequent renewal of wooden foundations under lumber piles entails considerable expenditure of time and money, to say nothing of the danger of infecting lumber by bringing it in contact with partly rotted foundation timbers. For these reasons foundations of a more permanent character are constantly growing in favor in retail and factory yards.

Sawmill yards, on the other hand, often contain several million feet of material and cover several acres. Lumber coming from the saw generally is piled wherever most convenient, provided it is placed at the distance from the mill required by insurance companies. Economy in storage space generally is not essential, and piles of the same species and kind of lumber are likely to be found in a number of different sections of the yard. In addition, the stock is constantly being turned over, thus giving an opportunity to renew the foundation timbers at comparatively small expense. A number of large lumber companies, however, have adopted cement as a foundation material.

Lumber-storage yards need to be reasonably well drained, or at least the contour of the ground should be such that water will not stand under the stacks after a storm. Otherwise decay is apt to get a start and spread throughout the pile. Where the ground offers but poor natural drainage facilities, some artificial system of drainage usually is employed. One of the illustrations shows the system used in the yards of two large lumber companies in the southern hardwood region. This arrangement not only prevents the collection of rain water under the lumber piles, but also gives the required slope to the stack, which on level ground has to be secured by building up the foundations.

A top dressing of cinders has been found satisfactory in some storage yards.

Rules for Piling Lumber

The following set of rules for piling lumber covers the more important points to be observed in the construction of foundations, shape of stack, arrangement of stickers, etc.:

1. Foundations (Endwise or Sidewise Piling)

(a) The foundations should be strong, solid, and durable.

(b) The top of each foundation should be level, and from front to back the top surface of the parallel skids should be in alignment, so that the lumber to be piled will bear equally upon each one.

Method of providing drainage under lumber piles.

(c) The front foundation should be raised above the second, and the second above the third, to allow a slant in the stack of 1 inch to every foot.

(d) The foundations should be spaced not over 4 feet apart, except for heavy planks and timbers.

(e) The front foundation should be of sufficient height to provide space for free circulation of air under all parts of the pile.

2. Lumber (Endwise Piling)

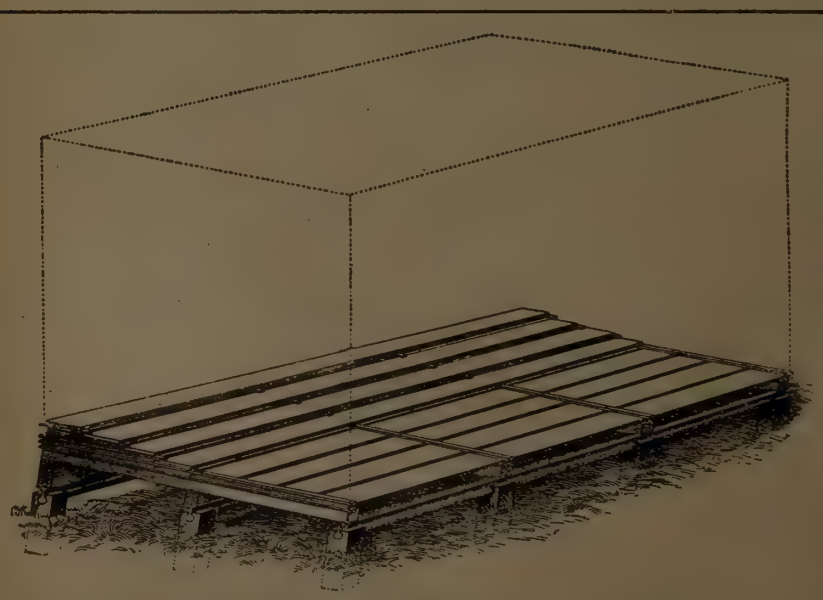
(a) Skids, preferably 2 by 4 inches, should be laid on top of the foundations.

(b) Boards of equal length should be piled together.

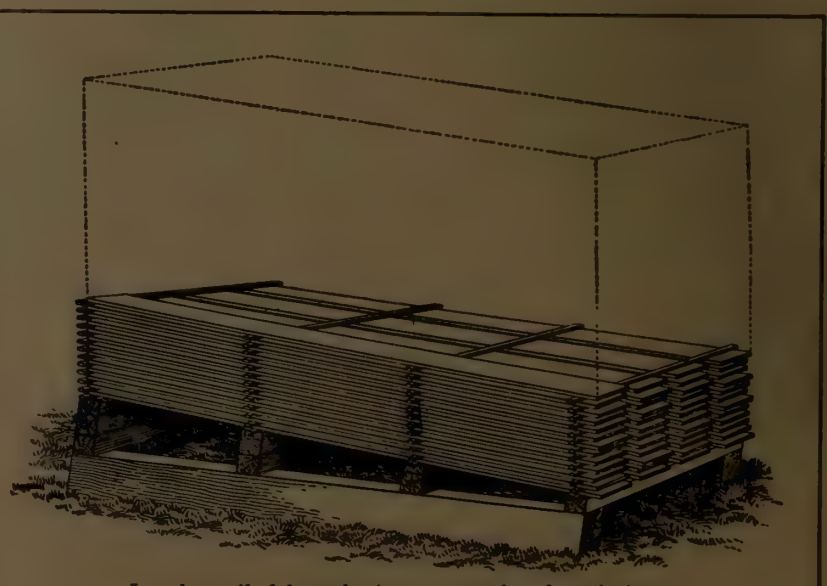
(c) The ends of the boards should rest upon the front and rear skids.

(d) A space of approximately three-fourths inch should be left between boards in the same layer.

(e) Lumber piled in the open should have the front ends of boards



Lumber piled sidewise on cement and metal foundations.



Lumber piled lengthwise on wooden foundation.

in each layer slightly protruding beyond the end of the layer beneath, to give a forward pitch to the stack.

3. Lumber (Sidewise Piling)

(a) Skids, preferably 4 by 6 inches, should be placed across the foundations at about 4-foot intervals. The number of skids depends upon the thickness of the lumber.

(b) Boards of equal length should be piled together.

(c) The boards should be placed on the skids, with about three-fourths inch between boards in the same layer.

(d) Lumber piled in the open should have the front board in each layer project slightly beyond the board in the layer beneath, to provide a forward pitch to the stack.

4. Stickers (Endwise or Sidewise Piling)

(a) Stickers should be of uniform thickness, preferably seven-eighths inch for 1-inch lumber and 1½ inches for 2-inch lumber. Their length should be a few inches in excess of the width of the pile.

(b) Stickers should be placed upon the layer of boards immediately over the skids and kept in alignment parallel to the front of the piles.

(c) The front and rear stickers should be flush with, or protrude beyond, the ends of the boards.

5. Roof Protection (Endwise or Sidewise Piling)

Cover boards, as a roof protection, should be laid on the top of the pile, extending a few inches beyond the front and rear ends of the stick.

6. Spacing Stacks (Endwise or Sidewise Piling)

Space between the piles should not be less than 2 feet, 4 or 5 feet is preferred if yardage conditions permit.

7. Dimension of Stack (Endwise or Sidewise Piling)

The customary width of stacks is from 8 to 16 feet. The height is governed by the size and character of the lumber and by the methods of moving it.

8. Treated Ends (Endwise or Sidewise Piling)

The ends of lumber 2½ inches thick or over, unless of the lower grades, should receive a brush treatment of paint or some liquid filler.

The rules just given are based on information obtained through field investigations and from lumber manufacturers and wholesale and retail dealers, and accord with the best lumber-piling practice in general commercial use. Certain species of wood, however, require particular care in air-drying, and in this case slight variations from the rules are necessary in order to secure the best results.

The Principles of the Trailer and the Advantages to Be Gained by Its Use

By C. H. Martin

The automobile and motor truck as developed to-day have a drawing power on hard roads that far exceeds their carrying capacity. Unless this drawing power is used while it is being made, it is wasted because it cannot be saved up and used at some future time. It must be used while it is being made. The trailer, which is in effect an ordinary wagon or cart built to stand the speed at which it is taken by the motor vehicle, is the medium through which this power may be utilized.

For the purpose it was intended, the ordinary wagon design cannot be improved upon, and as the purpose of the trailer is the same as that of the ordinary wagon—merely a carrying vehicle—it is only necessary to design the parts to withstand the strain of high speed to have a perfect trailer.

A year ago fully half of the motor truck manufacturers were very much opposed to having their respective trucks used for pulling trailers behind them. In fact, some engineers pretty well up in the profession opposed the use of trailers. But to-day I do not know of one single manufacturer or engineer who has not come out openly favoring their use.

As far as damage being done to the automobile or the motor truck when used to pull a load behind it, when one stops and thinks just a minute he must see that less damage can result by drawing several times the carrying capacity than carrying just a little more than the maximum capacity. The reason is this: That the driving mechanism of the automobile or motor truck must be built to overcome a certain resistance. This resistance is where the tire comes in contact with the road. The factors combining to make this resistance are weight and coefficient of friction.

In any properly designed motor vehicle carrying its maximum load, when a clutch is dropped suddenly into a flywheel the inertia of the flywheel will slip the driving wheels on a dry road. If it will not do this, and some part of the driving mechanicm gives away instead, that particular motor vehicle is weak structurally. When, however, more than the maximum load is carried, the breaking point is likely to come somewhere else and a gear may strip, a key sheer off, a shaft twist, or a universal joint give way. If no greater load is put on the driving wheels than the designer intended, no serious damage can result to the driving mechanism regardless of how much load is hauled back of these wheels. The wheels will simply slip until the flywheel inertia is exhausted and the motor stalls. Thus, it can be seen that instead of the motor vehicle being damaged by the use of a tractor, the driving mechanism is frequently saved, because there is not the tendency to put an overload on the driving wheels.

There are three methods of using this trailer principle that are more or less popular, and there is quite a controversy as to which is the best. They are the four-wheel type, which is drawn by a pole hitched to some part of the motor vehicle; the two-wheel type, which has a body balanced over the axle, and which is also hitched to some part of the motor vehicle; the semi-trailer, which is, as the name implies, only half a trailer and the other half is carried. All have their place.

In a perfectly level country, where little weight is required on the driving wheels for traction and where there is no congested traffic and no occasion for backing, a four-wheel trailer is as good as any other; or, under these conditions the two-wheel cart, where the load is balanced over the axle, may be used. But for city streets the semi-trailer is, in my opinion, more to be desired, the reason for this being that the over-all length is only a foot or so more than that of the convenient truck of the same loading space; it can be handled entirely by one man, can be turned in narrow quarters and backed in the same manner that a wagon is backed by a horse. Further, there is sufficient weight on the driving wheels for traction. The semi-trailer is fast becoming popular in the cities on account of the ease with which it can be manipulated. It is very much simpler and therefore lower in first cost, than the four-wheel trailer, and it utilizes the full tractive force of the motor vehicle. Probably the adoption of the semi-trailer to the exclusion of the four-wheel trailer in cities is being hastened by the fact that a number of cities are legislating against the use of four-wheel trailers because of the difficulty of manipulating them in congested traffic.

The advantage to be gained by the use of a trailer is in the main one of economy. With the conventional type of motor truck, as the capacity increases, the price mounts very rapidly; in fact, a two-ton truck costs almost twice as much as a one-ton truck. On the other hand, if a concern has a two-ton load to carry, a three-quarter ton capacity truck used with a two-ton trailer makes a two-ton motor vehicle at about half the cost of a two-ton conventional truck. This three-quarter ton truck and semi-trailer will do as much work as the two-ton truck and the upkeep cost is in the same proportion as the first cost. A pleasure car runabout may be used as a tractor and can safely draw a ton. It can thus do duty as a commercial vehicle as well as a pleasure vehicle. This is surely an advantage worth considering.

An advantage to be gained by concerns having long material to draw, is that the semi-trailer may be made almost any length desired; and owing to the fact that the tractor can turn completely under it, it can be handled and turned in streets no wider than the body is long. Lumber merchants, plumbers, painters and many others are greatly benefited.

A great advantage is that idle time of the motor vehicle can be entirely eliminated. One motor vehicle can serve a number of trailers —one trailer loading, another unloading and a third on the way. Another advantage gained by using the tractor principle is that one motor vehicle as a tractor may be used to draw many different kinds of wagons—end dump, bottom dump,long lumber wagons, drays, furniture vans or any other type of wagon the general trucking concern must use in its business. The conventional truck, on the other hand, has usually one body only.—The Lumber Co-operator.

Mr. Booth Heavily Assessed

Mr. John R. Booth, of Ottawa, will be called upon to "foot the bill" pretty heavily in connection with the new income tax proposals which have been introduced into the House of Commons by the Minister of Finance, Sir Thomas White. Unlike the other paper-making magnates of Canada, he is in a peculiar situation. He is running the business of lumber and paper manufacturing individually. He is the sole owner of the large mills at Ottawa, and has large interests in railroads, banks, and other corporations. On all incomes up to $6,000 per annum it is proposed to place a tax of 4 per cent. Above that amount there is to be a graduated super-tax imposed, which goes up to 25 per cent. on incomes over $100,000. Thus Mr. Booth, whose income is well over the last amount, will be assessed for a good many thousands.

The sawmill at Salt Spring Island, destroyed by fire last year, has not yet been rebuilt. It was owned by the Bullman Lumber Company, Limited, Victoria.

The Enquiry Corner

Answers to Questions by Readers
Can We Help You?

Grading of White Cedar Shingles

Editor Canada Lumberman:—Will you please send me a copy of the rules and specifications used in grading white cedar shingles according to the standard most generally followed:—J. S. Cassidy—Riviere Trois Pistoles, P.Q.

The rules drawn up by the White Cedar Shingle Association, in cluding members in the Maritime Provinces and Quebec, for the grading of 16 in. cedar shingles are as follows:—

Extras:—A perfect shingle, not less than three inches in width, free from rot, stains, knots, shakes, sap or other defects.

Clears:—To be not less than three inches in width, and no knots six inches from butt. Above that will admit of knots, but no hole larger than a twenty-five cent piece ten inches from butt. Free from sap and wane.

Second Clears:—To be not less than three inches in width, free from sap and wane. Will admit of sound knots, but nothing coarse or black to be closer than five inches from the butt. No holes or loose knots larger than a twenty-five cent piece, or rotten streaks closer than nine inches from the butt.

Clear Wall:—To be not less than two and one-half inches in width, six inches clear, and free from wane for twelve inches. Sap no defect.

Ex. No. 1:—These may include all narrow shingles from above grades but nothing less than two inches in width. Moderately sound knotted for four and a half inches from butt, but small black knots no objection.

No. 1:—All refuse shingles to show sound butts.

Bunching:—Shingles must be bunched tight on branded end, and no openings larger than one-half inch on back end. Joints to be well broken, and to be kept close to standards and ends of gauge.

* * *

Seaplane Cedar Wanted

Editor Canada Lumberman:—Do you know of any manufacturers who make white cedar suitable for seaplanes?—United States Wholesaler.

After sending out a number of enquiries in regard to this matter to large manufacturers in Quebec the Canada Lumberman is advised that it is exceptionally difficult to obtain this class of wood. The largest manufacturer who replied, stated that his firm took out a contract a few seasons ago for cedar canoe stock, 2 in. and under in width and ¼ in., ½ in., ⅝ in., ¾ in. thick and 30 ins. and up in length. As a result of their experience at that time they say:—"We will never take another contract of this kind again. We got about 70,000 feet surface measure during the whole season. As we were cutting square cedar all that season we had the best chance we ever will have. We now refuse to sell anything but 2 in. or 3 in. thick stock, the purchaser taking all that comes from the log." The same firm suggests that Port Orford cedar would be the best quality of cedar for this work. The Canada Lumberman would like to hear from any of its readers who can give further information on this subject.

* * *

White Pine Grading Rules

Editor Canada Lumberman:—I notice in current lumber prices published in your journal that white pine is graded into uppers, selects, fine common, No. 1 cuts, No. 2 cuts, and that barn boards are graded into No. 1, 2, and 3. Will you kindly explain fully the grading of pine and the quality of each grade?—Reader.

There is no official set of grading rules in use in Canada, relating to white pine. In 1912 an effort was made to have a set of rules adopted by the Canadian Lumbermen's Association, but although the rules submitted were generally commended, no action was taken. The rules submitted at that time, however, are as close to the actual practice in white pine grading as it seems possible to come, and a good many members of the trade are using them in their business. Under these rules the grades mentioned in the above question are described as follows:—

Uppers shall be 10 ins. and over wide and free from all defects, and stand a little bright sap-wood, in the absence of bright sap a small pencil knot is permissable.

Selects shall be 8 ins. and up wide. When 8 ins. wide it may carry the same defects as a 10 in. Upper, and these defects increase according to width of piece.

Fine Common shall be 8 ins. and up wide. A piece 8 ins. may have bright sap across back or slight sap stain, may also carry a few pin knots, providing they do not go through the piece.

No. 1 Shop shall be 6 ins. and up wide, and 10-16 ft. long, and shall cut not less than 66-2/3 per cent. into No. 1 door stock, giving sufficient stiles to care for the rails and muntins in a standard 4-panel door. Fifty per cent. of the remainder shall produce No. 1 sash cuttings.

No. 1 Barn shall be 4 ins. and up wide, will admit of sound round red knots of about 1¼ in. in diameter, and must have good edges, no shake, bright sap.

No. 2 Barn shall be 4 ins. and up wide, will admit of sound red knots, 1¼ in. in diameter, an occasional tight branch knot, must have one good edge, will admit of some shake and stain.

No. 3 Barn shall be 4 ins. and up wide, will admit of sound red knots 1¼ in. in diameter, and smaller black knots, also branch knots, either red or black, if they are tight, considerable fine shake. Ten per cent. of the pieces may show stain on worst face.

New Methods in Retailing

Today there are so many different ways of advertising that it becomes a long and tedious job to describe them. However, the most important is a clean, attractive, handy place of business, an error-proof system of accounting, the milk of human kindness and a living, breathing, palpitating desire in your heart to give service. These are the best paying advertisements any man can have, says a contributor to the Mississippi Valley Lumberman.

Your office should be warm, neat and pleasant. A little paint goes a long way toward making the yard presentable. The sheds and fence should be kept well painted, the alleys raked clean, the stock free from dust and well piled.

It isn't always possible to have a fine office and shed, but it is always possible to have the poorest of equipment neat, clean and cheery.

Nearly every small town has at least one family poor as Job's turkey, whose children's clothes are threadbare, patched and worn, but whose faces and clothing are clean and neat. You wonder how the mother can keep her children so tidy. You compare them with the best dressed children in your town and they do not suffer by comparison.

Your yard can be kept as sweet, neat and attractive, no matter how poor a layout you may have, if you have the imagination to plan the proper improvements and the gumption to square things away. A neat yard and a tidy appearance will make your goods appear fifty per cent. better to the trade.

Train yourself to be accurate in your accounting and do not allow either yourself or others to do slipshod, hurried work on the books. Give your customer an invoice with every purchase and either a binder or heavy envelope to keep it in. Do not allow your book work to accumulate. The saying "Do it now" is particularly applicable to bookkeepers and accountants. In order to give the best of service to your customers your accounting system should be as nearly perfect as possible. Then if you are constantly on the lookout to avoid mistakes, ready to adjust differences and rectify errors, have a broad enough vision to put yourself in the other fellow's place, are big enough to overlook his pettiness and go the limit to please him and give him real service, you are bound to sell goods. If you go out with a good publicity campaign and draw the people in to show them what a good fellow you are and how your wares excel, you are bound to sell more than the best fellow in the world, if he doesn't let the people know he is in business.

Don't Start Until You Are Ready

However never start a publicity campaign until you have everything in shape, not only to display your goods but to handle your business. The man who advertises before he is thoroughly ready to do business does not reap a dollar's worth of benefit from his advertising but rather loses heavily, for the customer who is attracted to your office or place of business by your advertising, and is disappointed, will never take your advertising seriously again. You may never get him back. He has you noted as a prevaricator and your advertiseing arguments do not affect him in any way, except the wrong way.

The small "two column, eight inch" card stating that your place is headquarters for lumber, lath, shingles, lime, cement and plaster, "Let us figure your bill," run twelve months in the year in the same spot in the local paper is just about as effective an aid to your sales department as a boy scout armed with an air rifle would be in an invasion of Germany.

Why not change the ad weekly, both in size and wording? Put a little thought into it, run a few attractive cuts and make it different.

If you haven't the time and ability to write the newspaper ads, hire an advertising agency to write them for you. It is an easy matter

to find an advertising bureau which will furnish retail yards with a new ad each week.

The newspaper reaches homes you may never be able to reach in any other way. You should be sure your portion of it is as catchy and interesting as possible. Take a few pictures of representative farm and city buildings for which you have furnished the materials. Have cuts made from them and run them in connection with your newspaper advertising. You can keep them to make up a catalog in the fall. These cuts are inexpensive and thus serve a double purpose.

Show What You Have Done

Did you ever consider putting out a book of your own, showing dwellings, barns and business buildings for which you have furnished the material? A booklet made up of familiar scenes will be a far better advertising scheme than a calendar. Such a book can be gotten up at very little expense if you use the cuts furnished you free of charge by the side line people and the cuts of local scenes as suggested above.

Whether you can get up a catalog of your own or not, you don't want to overlook the value of the free advertising offered by the people who sell you gates, wire wall board, paper, etc. Most of these concerns have a good and complete advertising campaign which they put on free of charge. This advertising is worth good money to you and requires little of your time. Simply see that it gets into circulation properly and it doesn't cost you a cent.

Circular letters expertly written and carefully gotten up are the best of advertising. Seal your letter and put a two cent stamp on it. Make them look and read as much like a personal letter as possible. Avoid "I" and "we" in your letters and put strong emphasis on "you." Get away from yourself and try to put yourself in the other fellow's shoes. Try to imagine what would interest and influence you if you were receiving the letter.

Make Every Sale an Advertiseement

Don't forget to tag every big load of lumber that leaves your yard. It may pass a dozen people who are planning to build, and bring your name conspicuously before them. Tags are inexpensive and effective. Put up a sign on every job where your furnish materials. Let the world at large see that you are selling some of the material that is being used around town.

Unusual or "stunt" advertising gives full play to the imagination and is the seasoning of the whole dish. It calls attention to the steady, solid, consistent slugging of your other advertising and forces the attention of the public to you and your business. Whether it consists of an elaborate display at the fair or merely of a load of lumber properly tagged, following a circus parade, it calls decided attention to your business, while your regular advertising is more of a constant reminder. If you neglect the unusual or stunt advertising you cannot get the full benefit of your newspaper advertising, catalogs, circulars, street car cards, picture slides, etc. The stunts throw all of your other work into the lime light. When your newspaper ad catches the reader's eye, he thinks of the stunt you pulled off at the fair or on circus day, wonders what you are doing now, reads your copy and remarks that your outfit is a live wire. You need not wait for a fair or circus to come along. Opportunities for stunt advertising appear every day if you are on the lookout for them and not afraid of publicity, as some men seem to be. The day of the old conservative, super-dignified close-mouthed business man is past and to succeed you must court publicity.

The Band-Saw in Shipbuilding

The heaviest irregular band-sawing in the world, it is claimed, consists of sawing out heavy timbers for the ribs of wooden ships. Certainly it is no child's play to juggle, say, a 12 x 16 in., 8 or 10 ft. long, over the saw table, and saw it into a gracefully-twisted curve right to the line. This is what the ship band-sawer has to do. To facilitate his work as much as possible he has at his disposal something like a half-dozen husky helpers and a heavy tilting band-saw especially designed for ship work.

The massive table of the ship band-mill always remains level, but a frame carrying the band wheels can be tilted anywhere from 90 to 45 degrees while the machine is going at full speed, and even when the saw is in the cut; in the latter case, however, the tilting must be done carefully and comparatively slow. This is how the twisted cuts are made, i.e., by gradually tilting the saw as the timber is fed through. On some ship-saws the tilting is done by power, but in other cases the saw is tilted by means of a hand-wheel. One helper is assigned to this work, and his station is on the extended table back of the saw.

Every timber, besides being scribed for outline, is marked according to the shipbuilder's numbering code, which designates the angle at which it must be sawed. The man at the tilting-wheel observes these numbers and sets his saw to coincide with similar numbers on the machine. When the numbers on a single timber vary it means the angle changes just that much in the length of the piece, resulting in the twisted effect above mentioned.

While the timber is being sawed the free ends are supported by roller-top trestles, on a level with the machine table. The feeding is helped along very materially by the crank man, who slowly turns an iron friction roller set in the table just in front of the saw blade.

The band-saws for ship work vary from 1 to 1½ in. in width. A thin blade, however, is out of the question, because it is not stiff enough; it is for ever leading in or out. It produces a snaky cut and gives trouble generally; cracks soon develop, and a broken saw is invariably the result. An 18-gauge saw, with strong teeth, set for plenty of clearance, gives the best results in ship work.

There is some question as to whether rubber-tired wheels are best for this type of saw. The new machines are, I believe, all fitted up that way, but many operators prefer to run their saws directly on steel-faced wheels, the same as in log sawing and re-sawing. They can then fit a metal scraper to the wheels to keep them clean and free from dust. A rubber-tired wheel always picks up a lot of dust and pitch, which sticks so tight that it can hardly be removed.

When the saws are run directly on steel or iron-tired wheels the sharp points of the teeth must, of course, project somewhat over the rim. For this reason it is important to select a machine fitted with adjustable wheels, or at least one wheel that can be shifted on its shaft, so the wheels can be lined up to make the saw track perfectly.

Just now there is a very decided boom in the shipbuilding industry all along our coast line. New yards are springing up at every port, and every yard is fairly teeming with activity. In spite of the great gangs of expert workmen going at top speed and under the direction of master shipbuilders, it takes many months to complete even a fair-sized wooden vessel.

Only the best of workmanship and material go, as a seagoing ship can be built none too strong to resist the elements. The timbers must be sound, clear, and of the strongest structural wood obtainable.—"Traveler," in the Woodworker.

Chaudiere River Flood Causes Heavy Losses

Immense loss was caused to lumber companies by the flood which swept through the Chaudiere Valley as the result of a heavy storm on July 30. The loss is estimated at over two million dollars, but this is more or less of a guess. Booms at the mills of the Brown Corporation, John Breakey, H. Atkinson, and B. C. Howard broke, owing to the unprecedented rise in the height of the river. This caused a large amonut of lumber and pulpwood to be carried down the river into the St. Lawrence. The lumber, according to one correspondent, covered the St. Lawrence from shore to shore for over a mile between Quebec and Levis. A lot of this was thrown upon the shore. The River Chaudiere was also packed with the floating wood, and much of it was piled in some of the villages as it was caught on its way downstream. A report from Sherbrooke puts the loss of John Breakey at $1,500,000 and of the Brown Corporation at $750,000.

British Navy Needs Canadian Ash for Oars

An important British company which manufactures long oars used for the life boats of ocean liners and the Royal Navy, wishes to secure ash timber limits in Canada containing sufficient quantities of ash to justify the establishment of a plant for the manufacture of boat oars in Canada. Information may be obtained by addressing the Commercial Intelligence Branch, Department of Trade and Commerce, Ottawa. (Refer File 15782).

Corporal Huntley G. Gordon, son of Mr. Philip D. Gordon, of Mason, Gordon & Company, Montreal, has been slightly wounded. He enlisted about two years ago in one of the Highland battalions raised in Vancouver, and has been at the front for over a year. Prior to enlisting he was in the lumber business in British Columbia. He is 24 years of age.

A freight train consisting of nine cars loaded with pulp recently ran away from the yards at Jonquiere, P.Q., and traveled down the line to Chicoutimi at a rate of 45 miles an hour, winding up by crashing into a locomotive and van of the Quebec and Lake St. John Railway, from which the crew only escaped by jumping, a few seconds before the collision occurred. The damage to the cars and pulpwood was extensive.

When one of the big trees in California fell John Muir counted 4,000 rings from the heart out. That meant the tree was forty centuries old. Thus it was a strong young tree when Abraham went into Egypt; it was bearing seed when Sodom and Gomorrah were destroyed; it was old as America when Joseph was sold into Egypt, nearly a thousand years old when David slew Goliath, and older when Christ was born than the Christian religion is to-day!

Canada's Timber in England and France

Special Trade Commission Criticizes Canadian Producers for Lack of Initiative in the British Market—Apathy a Drag on French Trade

The Special Trade Commission sent by the Canadian Government to Great Britain, France and Italy have published an extensive report of their work, from which the accompanying report on forest products is reproduced. While much that the report contains is valuable to the trade and industry, it should be borne in mind that the transportation and marketing difficulties have been greatly increased since the report was prepared, and that, for the time being, exports of timber and lumber to Great Britain are possible only under special license.

THE average annual value of wood and timber imported by the United Kingdom is $1,250,000,000. The largest import from Canada is associated with sawn or split fir, pine, and spruce, which was valued at $13,000,000 in 1914-15 (fiscal year). The total British imports were valued at $63,500,000, so that Canada does not supply more than one-fifth. Her chief competitors are Russia, Sweden, the United States and Norway. In normal times imports from Russia exceed $35,000,000; from Sweden $15,000,000; from Norway $5,000,000 and from the United States $8,000,000.

From the time of the earliest settlers, Canada has exported timber. Many large and prosperous firms have carried on business with Great Britain for decades past. To-day the timber business with the United Kingdom is carried on by relatively few firms. Some of the largest shippers in Canada are closely connected with British firms. They understand the business thoroughly and carry it on most profitably. From an outsider's point of view it would appear that the bulk of the sawn lumber suitable for the English market is under the control of very few dealers. It would seem that the business has been largely left with them without serious efforts on the part of a large number of Canadian lumber manufacturers to compete.

The consequence has been that with a limited supply the price often went up on Canadian lumber, while other countries competing with Canada for the valuable British market, kept their prices reasonable and supplied sufficient quantities.

While the Commission, with its comparatively limited knowledge of a trade which has been steadily developing for many years, can hardly hope to point to any improved methods of carrying on the business, it would nevertheless conclude, on the evidence at its disposal, that if more of our Canadian dealers looked after the British trade, a much larger and more varied production at home and for exportation is bound to follow in coming years.

The situation in Great Britain is notably different from that found in France, in two important respects. First, Canadian forest products are well known; second, the difficulty of securing ocean transport is, in normal times comparatively slight. It is therefore easier to sell Canadian timber in Great Britain than in France.

A point of outstanding importance in connection with Canadian timber trade with Great Britain is that an evident lack of initiative on the part of our producers has denied to us the important place in the British market which is due to one of our great national industries. Few merchants are sufficiently interested to send their agents overseas to ascertain the needs and prices current in Great Britain. Many Canadian firms even do not reply, or reply carelessly, to enquiries from abroad. In fact the British merchants have found it necessary to open up agencies in Canada. They naturally attend to the needs of their own business, and it is unreasonable to expect that they should go beyond this for the sole purpose of expanding Canada's lumber trade.

Another very serious obstacle is the cost of preseent ocean transportation, although it must be admitted that prior to the war when occasionally rates were reasonable, we rarely tried, and more rarely still were prepared to take advantage of such opportunities in Great Britain.

Bristol, Liverpool, Manchester and the Western coast of the British Isles can absorb our entire present production without taking into account the needs of London, Hull and the eastern coast.

The investigations of the Commission do not lead to the conclusion that pit props, railway sleepers, poles and pickets are in themselves paying items of our lumber trade. It seems, however, that they would largely help the expansion of our present sales in Great Britain. They are necessary commodities, and if customers in Great Britain must seek them elsewhere, they will also fill the rest of their orders elsewhere. Tariffs may have largely prevented us from selling doors, windows, mouldings and floorings in the French market, but the reason does not hold good for the English trade. How can Canada hope to build up an extensive export trade in these commodities, when in 1914, for instance, for the needs of our own market, our imports of wooden doors alone, from the United States totalled $476,000? In 1915, the smallest year of the building trade for a long period imports reached $235,000. The doors which we import in such large quantities are exactly those which are required in England.

While this condition has lasted about four years, it is only temporary, and may very well correct itself in the near future, as prices of United States wood products have already advanced and will probably continue to do so. Of course, our own manufacturers cannot expect to recapture even the domestic market, unless they are fully equipped, not only in the manufacturing end. but also in selling organization. They should seize the opportunity which the war has created for an extension of trade.

This practically unlimited demand which will exist in France after the war, cannot possibly be satisfied by the United States. Canada should have a large share of it. If so, why not, at the same time, make a determined effort to conquer the British market? It must, however, be borne in mind that cheap production alone is not sufficient, and that large and effective selling organization, generously stimulated by advertising, is also necessary.

In the past, Norway and Sweden have competed with the United States and not without success. This is indicative of possibilities. At all events prices offered are fairly attractive.

Small Woodenware

Broom handles.—In 1912 an average of 3,400 gross were imported per month. About 1,200 gross came from Scandinavia, 700 fross from Finland, 1,100 gross from United States and 400 gross from Canada. Canadian and American handles are preferred to others, inasmuch as the wood used is more suitable. The importers will pay slightly higher prices for Canadian handles. The average price in 1914 was 12s. per gross—£1,980 per month, or $118,800 per year.

Sizes, 50 in. x 1½ in. x 1 in.

Quality, 1st, 2nd, and 3rd.

Packing, ½ gross or 1 gross bundles, preferred in canvas wrapping.

Dowels.—In 1913 about 68,000,000 pieces entered Great Britain, 13,000,000 from Austria, 14,000,000 from Scandinavia, 32,000,000 from the United States, 9,000,000 from Canada. The Austrians had been gradually increasing their exportation, up to the outbreak of the war, but on account of their not having any other timber available but beech, which is not suitable for all classes of dowels, their sales were limited. Scandinavian timber is most unsuitable and their goods have always been sold as second quality. They were cheaper than the United States or Canadian product, but the woods were not sold in large quantities. United States manufacturers specialize in the dowel business, but Canadian manufacturers could probably compete to advantage if they were organized for export business. When Canadian dowels are imported they give every satisfaction. The average value of dowels imported to Great Britain in 1913 was £1 per thousand, or $34,000 per year.

Packing——	3/16 in.	1,000 per bundle
	1/8 in. to 5/16 in.	500 per bundle
	3/8 in., 7/16 in. and ½ in.	200 per bundle
	9/16 in., ⅝ in., 11/16 in. and ¾ in. ...	100 per bundle
	7/8 in. and 1 in.	50 per bundle

Clothes pegs.—These goods are only made in the United States and Canada, for the reason that timber grown in other countries is not suitable. It is considered that the United States has 80 per cent. of the trade. The average yearly imports have been 902,777 gross at 2s. per 5 gross case; in all about $90,275.

Skewers.—While this article is not very profitable to the manufacturer, large quantities are made in the United States, and to a certain extent in Canada, the reason being that it is necessary to use maple or hickory, and these woods are not grown in other countries.

Cabinet turnery.—Although up to now Canada has not exported very much of this class of wood product, there is no doubt whatever that we could do a large and profitable business in this direction. Under this heading may be included Windsor legs, fore feet, spindles, couch and table legs. These goods are usually imported from Austria, Scandinavia, and Finland.

Pastry boards.—Canada has a fair share of the better class trade, on account of having the most suitable timber, basswood. The cheaper

boards, as produced in Germany and Sweden can easily be made profitably.

Tool handles.—File and chisel handles made from beech, birch and ash, mostly come from Germany, Scandinavia and the United States. Hickory pick, sledge and hammer handles and ash hay fork and rake handles are imported chiefly from the United States. Canada is capable of producing the latter class at least. Such Canadian handles as do enter the British market give every satisfaction.

Other articles required in Great Britain are plugs for paper mills, rolling pins, spring clothes clips, towel rollers, parts for toys such as balls, wheels, reels and picture blocks, tea trays, ladders, coat hangers, knife trays and box boards. Samples of all the foregoing can readily be secured by the Canadian Trade Commissioners.

The government and the manufacturers of Canada have given much thought to this subject of small wooden goods, and it will require still much more. It is full of possibilities for our own people, who will adapt themselves readily to this work and find the material at hand.

The difficulties in the trade itself can no doubt be remedied. The country people of Canada have always, by hand, in their own home, made the very best of axe handles, toboggans, sabots, etc., all of which require ingenuity and skill—more indeed than any of the articles comprised under this heading.

Centralizing and specializing, as suggested, may be useful, but will probably not prove altogether sufficient to implant the industry of these smallwares in Canada. It could rapidly be disseminated in thousands of homes by the exhibition of models, and the assurance that the production could be sold at a reasonable price. It would be unwise to depend exclusively on the production that will result from the labor of factory hands, from obtaining large quantities of raw material, and from elaborate modern equipment. These advantages alone will not conquer and hold the business in a way profitable to the community. An appeal for the employment of the idle moments of our long winters by the people at home, who do not depend on the immediate wage payment of time occupied and material employed, might result in a large production.

To promote this idea, technical schools might be brought into cooperation, and primary schools also be organized to cultivate large production. This development would also demonstrate the value of our forest products when used in this line of industry. The marketing of this product should not involve any more difficulties than the wheat crop, the fruit crop, the fisheries, etc. When we are assured of an outlet we should not stop to doubt that the purchaser will appear.

If Canadians bear in mind that every year five times more of our forest resources go up into smoke than are cut and made use of; and that 60 per cent. of what timber we cut goes into waste, then surely it is time to face the question in as many ways as can be suggested and work hard on it.

The French Market

France consumes, every year, an enormous quantity of all classes of lumber products that Canada can furnish. In 1912 French imports in sawn timber and lumber, from countries subject to the same customs tariff as Canada were valued at 200,000,000 francs; in 1913 the amount was even greater. After the war, this demand will increase prodigiously on account of the necessity of building temporary shelters and of re-building destroyed property. It must be remembered that France has retaken from the enemy 753 towns (communes) containing 16,669 houses that must be completely reconstructed and 29,584 that need repairs; it must also be borne in mind that there are now 247 towns on the firing line and 2,554 towns at present occupied by the enemy, This referred to conditions in July, 1916.

In considering the question whether Canada can successfully compete for this trade, it is important to note that she has one incontestable advantage over the United States in enjoying the minimum tariff on manufactured wood, while they pay general tariff. The present supplies are received mostly from United States, Russia, Scandinavia, Switzerland and some through England, but none of these countries have any preference over Canada in custom duties.

At the present time, in spite of the exorbitant increase in freight rates, there is a large and varied demand, as is proven by the unsolicited offers received during the short stay of the Commission in France.

In ordinary times the freight from Riga costs 30 francs per 1,000 feet, whereas from Nova Scotia the average is 50 francs. The port of Bordeaux handles large quantities of timber for mine props. This class of timber comes from the forests of Landes, France, and is a resinous maritime pine, lifeless and unfit for any other use. It brings 23 francs per ton and England buys all that can be supplied.

Woodenware.—There is a very general demand for small woodenware, such as dress hangers, towel rollers, washboards, shuttles, etc. However, low prices governing the market and high tariff duties prevent Canada from taking advantage of this trade for the present.

Ties or Sleepers.—An unlimited and continuous demand exists. Our Douglas fir is extremely abundant and in our opinion well suited for the use; samples have been sent to some of the railway companies in France. A test was made by these companies and the result thereof was embodied in two reports from their chief engineers on the 23rd of May and June 8th, 1916. (These reports are now in the hands of the Commissioner General in Paris). Although these reports are favorable as to the durable qualities of the wood, they are unfavorable as to its capacity for the retention of spikes. This objection, and the experiments upon which it is based, do not seem to justify the disqualification of our lumber for such purposes, especially when its primary quality, that of durability, is conceded to be excellent. To extract a spike from a sleeper immediately after it has been driven cannot conclusively show the grasping and retentive power of the timber. But even admitting that it does, then why not overcome the difficulty by using special spikes entailing no greater cost? The great point gained by sending the sample is that both the railways have agreed to try the sleepers in actual use where it is expected they will show their real value.

It is evident that France cannot supply her own requirements. The policy adopted throughout France for the conservation of her forests, to cultivate them and to cut only as much as can be produced each year, necessitates the purchase elsewhere of the wood she needs for building purposes, etc. A change in this policy would bring about a revolution in France, where whole districts (communes) pay their taxes from the annual revenue from their forests, and in some cases even distribute a considerable surplus among the inhabitants.

Before the beginning of hostilities the lumber merchants of Canada were satisfied with the profits to be derived from the local market and exportation to England. The trade was carried on without effort and with happy results. Necessity had not forced them to seek new markets which they did not need in order to completely dispose of the limited quantity produced. Thus we have, in the first place, the absence of necessity and lack of interest on the part of the Canadian merchants. Furthermore, the conditions under which lumber is sold on the French market are totally different from those existing in Canada. The metric system of measurement is no more understood here in the Dominion than is the Petrograd standard of measure. It must even be admitted that the value of the franc is little known. The same is the case with the weight of wood in kilos. We are not in the habit of furnishing samples. It is a trouble to obtain information as to freight and insurance. Such are the obstacles that the care-free prosperity of our lumber merchants has made no effort to overcome.

In contrast to this apathy we find the constant and ingenious activity of our competitors. The timber merchants of the United States, trained and equipped by a close study of commercial methods, do not hesitate to cross the sea with their samples, in order to make known the value of their products, and, as a result, they make large sales.

The English agents who have always made a specialty of exportation and transportation of all kinds of goods, are willing to make special terms for freight, to sell, using the system of measurements the most convenient for the customer and to compute their price in francs or in shillings, as the case may be.

The Germans, who carry on their commerce in a scientific manner, provide themselves with handbooks, in which may instantly be found the price of lumber per thousand feet, be it computed per standard or per cubic metre—in dollars, in pounds sterling, in francs, or marks, etc. In these handbooks may also be found the weight of the various species of wood in order to facilitate estimating the cost of freight. Finally, we there find the average rates of exchange. Armed with this guide, the salesman, who needs only to learn the names of the species and the qualities most in demand, passes often for an expert and impresses the French consumer.

Very little Canadian wood is sold on the French market because it is almost unknown, and, what is worse, in the few places where it is known it has the reputation of being of very inferior quality. This seems hard to believe, but it is only the strict truth. It can be explained by the fact that the Canadian lumber exported has been sent almost exclusively to Great Britain and when, from time to time, it was sent from that country to France, it lost its name and passed as the product of other countries. This was the case with our fine woods that brought high prices. It must be admitted, however, that certain shipments of Canadian wood of a most inferior quality were unloaded on the French market at low prices because they could not be disposed of elsewhere. Such proceedings have caused incalculable harm to the reputation of our products. Unfortunately, our exports of high quality lumber have not been able to counteract this undesirable reputation, since they have always been credited to other countries. At Contras, near Bordeaux, the following sign is displayed on a large lumber factory: "Bois de l'Amerique du Nord" (North American Wood). It is evident that in France, Canada does not exist as a separate country, only "American" products are known.

THE pulpwood trade of the province of Quebec has become so large during recent years and covers such an extensive territory as to be overshadowing the lumber industry in some localities. Numerous manufacturers of lumber who have operated sawmills for many years past have been devoting their efforts and equipment for a year or more to the production of pulpwood, claiming that in this business there is to-day a greater profit.

Some of our readers are fairly familiar with the pulpwood production industry, but there are others, particularly those located west of Quebec province who have not had an opportunity of learning how the operations are carried on. The Canada Lumberman is fortunate in being able to present a description of the method of operation as now conducted. This has been prepared for us by a pulpwood operator of many years' experience. In reading what follows it is important to bear in mind that on May 1st, 1910, a law came into force in the province of Quebec making it compulsory that all timber cut on Crown lands shall be manufactured in Canada, that is to say, converted into pulp or paper, deals or boards, or other articles of trade or merchandise of which such timber is the raw material. This law also contains a clause to the effect that timber simply cut into lengths, piled, barked or otherwise worked preliminary to the manufacture of pulp and paper, deals or boards, etc., should not be considered as "manufactured" within the meaning of the regulation.

Before this law was put into effect, most of the larger operators in Quebec province converted their small logs into rossed pulpwood, and as a matter of fact some of the larger American companies operating pulp and paper mills in the United States had large rossing mills in Quebec province when the law came into effect. This business then came to an end and such pulpwood as is now exported is cut on Seignioral or deeded lands, known in the province as "freehold lands." Some of the large American companies met the situation after 1910 by purchasing large areas of these "freehold lands," from which they have been exporting peeled pulpwood in large quantities annually.

To-day the quantity of rossed pulpwood exported from the province of Quebec is very small compared with the quantity exported previous to 1910, and nearly all of it is known as "peeled wood." This wood is peeled from May to August when there is lots of sap in the tree. Later on, it is cut into 4-ft. lengths. In the winter it is hauled to railway sidings or to rivers. Most of this work is carried on by farmers or settlers on their own lands. The cost of felling, peeling, sawing into 4-ft. lengths, making roads, piling, and finally hauling out on winter roads now varies from $5 to $6 per cord of 128 or 144 cubic feet, depending upon the district where the wood has been cut. In some sections the English measure is used and in some sections French measure. Nearly all of this work is done by contract in cases where companies own their freehold lands, and even some of the settlers and farmers have their work done in this way. The price paid during the winter of 1916-17 in one of the more important pulpwood producing districts of the province was from $9 to $13 per cord of 128 cubic feet, loaded on the cars. There was considerable increase in the price from the time the first wood was sold in December, 1916, up to April or May, 1917, thus accounting for the considerable range above quoted. Prices paid for pulpwood vary to some extent according to the freight rate from the loading point to the mills in the United States. The present high prices are chiefly the result of shortage of labor. Those who are closely in touch with the situation are expecting the price of pulpwood to continue strong for some time to come.

One of the interesting effects of the law passed in 1910 regarding manufacture of raw material in Quebec province has been the artificial stimulation in the market value of freehold lands. As pulpwood could be exported only when taken from lands of this kind, there immediately developed a great demand for them and their value began to advance, and is still advancing and they are very difficult to purchase.

The contract system under which most of the pulpwood logging operations are carried on in Quebec province is quite a different matter from the ordinary logging operations in lumber camps of Ontario and other parts of Canada. For this reason the following descriptive details will be instructive and interesting to many readers.

In the province of Quebec, most pulpwood operations are run on the contract plan. Companies have found that they can thus manufacture their pulpwood more cheaply than by having their own crews in the woods. In surveyed townships the unit of operations is the lot, which is usually one hundred or two hundred acres. The smallness of the unit is of advantage in supervising contractors. A contractor is not necessarily restricted to one lot, of course. In unsurveyed districts, the boundaries of the unit of operation are usually blazed. Surveyed and mapped areas are most easily handled.

Early in the spring the prospective contractors, or jobbers, as they are called, come to explore the available jobs. Usually the contractor undertakes the entire job of landing the pulpwood on the river bank. Sometimes he may undertake only the peeling and sawing, while another, later, undertakes the hauling.

The company finances the operation. For peeling, the advance is usually one dollar and twenty-five cents per cord, and for sawing, about the same amount. The contractor receives these advances as the work proceeds, and his work is inspected, about once in two weeks. For hauling, no payments are usually made until enough wood has been hauled and scaled to offset advances made for peeling and sawing. In operations not located near settled communities having stores where the contractors may buy their supplies, the company has to furnish them. For this purpose the company maintains depots or storehouses. Also under these circumstances the company usually pays the workmen their wages. Both the contractor's store bill and his men's wages are deducted from the advances. All this entails keeping sharp watch of the contractor's accounts. Of course, at the beginning of the operation, while he is building the camps and doing other preliminary work, the contractor is in debt to the company. It is sometimes a difficult task to decide just where a contractor must get out of debt or be left to his own resources. The average jobber has but little means, and consequently has to shut up shop if the company refuses to make advances. It is, of course, much safer for the company not to furnish supplies to jobbers, when other arrangements can be made.

The Contract System

The contractor who undertakes a contract from a company usually turns around and sublets as much of his job as possible. He sometimes succeeds in subletting all of his area, but more often he has to operate the least advantageous parts himself. Into these parts he sends crews hired by the month.

The sub-contractor undertakes the peeling, sawing and hauling at a price that leaves a profit for the general contractor. On the poorest locations this profit is almost nothing, on the better locations from twenty-five to seventy-five cents per cord. On the portion that he operates himself, the general contractor may make nothing. Sub-contractors sometimes undertake only the peeling and sawing, especially on small parts of the operation. Several of these small jobs are united to form a hauling job. Peeling begins in May and continues up to the last day of July or into August, depending on weather conditions and situation of timber. Dry weather or dry situations are not favorable to late peeling.

Peeling crews ordinarily consist of two men and three-men crews are used more or less, and rarely one-man crews. Where the timber is small one man can fell and peel well enough. In a two-man crew, one chops and the other peels. The chopper trims off branches, and, if the peeler aids the chopper in felling the chopper is the one to lift the "strip" along the upper surface of the tree. This strip is necessary for inserting the peeling spud under the bark. Crews adjust the work to suit themselves. In three-men crews the peeler has only the peeling to do. However, it is rare for a peeler to keep up with two good choppers.

Most contracts call for felling with a saw. Because it takes the peeler away from his work to help in felling the men's inclinations are against using the saw, for it makes an extra tool to carry around.

One-man saws are used in some operations. These are similar to large hand saws; they have a second handle fitted just ahead of the usual one. This handle is fixed to the back of the saw and is detach-

able. The writer has seen this tool used only in small timber where one man was working alone. A home-made peeling spud consists of a flat piece of iron ¼ in. x 1¾ in. x 15 in.; one end is slightly sharpened and turned up.

Properly peeled pulpwood is free from bark, and all branches or knots must be trimmed close to the surface of the tree. It is difficult to prevail upon workmen to observe these specifications. It requires considerable care to trim closely the branches on the underside of a tree. The bark on the underside of a tree where it rests upon another is often left. In some districts the contractors are required to have all trees topped and turned as they are peeled to ensure proper peeling and trimming of the under side of the tree. Some claim that sawing off the top renders the tree more unstable and therefore more difficult to saw up. Trees are peeled to three inches in the tops.

Some contractors blaze their roads before beginning to peel. The timber can then be felled with regard to subsequent steps of the operation, and thus, of course, the timber is likely to lie more advantageously for sawing and road making, than when roads are blazed later, for, a tree standing in the road may be felled close to the ground, thus saving the road makers the work of sawing off the stump.

The Piece Work System

On some operations contractors have tried the piece work system for peeling, that is, the crew is paid by the cord. To do this the contractor must keep a count of trees peeled by each crew and also he must determine the average number of trees per cord for each crew. Given the usable length and mid-diameter of a tree the contents in cord feet may be obtained from tables published for that purpose. A steel tape is used for measuring the length, and calipers for measuring the diameter. Counting from 1,500 to 2,000 trees is a day's work for one man. On the days when he measures, the counter needs an assistant. In the hands of most contractors this system does not work out well because they do not engage proper men for the work. It requires careful, honest work on the part of the counter. While the result is never altogether accurate, the system can be worked advantagously, for, unless there is some check on the amount of labor done by each crew, peeling is costly.

Some contractors merely count the trees and average the number of trees per cord by estimate. Men of experience can do this fairly well.

As soon as the peeling season closes, the sawing begins. Usually two men saw and a third piles, at the same time removing bark and trimming knots overlooked by the peelers. When timber is scattering the piles are small, one-half cord or so. In heavy stands the piles are larger. The piles are usually four feet high for convenience in measuring; they should run along the road and not at right angles to it, as the wood is then more easily loaded. If roads are blazed before sawing time the piles are better located. All piles should be substantially made so that sticks will not fall and be buried in the snow and lost. Unless skids are placed under the piles the lower sticks will freeze into the ground and probably remain there.

The least possible time should be wasted in handling cull timber. A tree cut up into four-foot bolts, each of which is cull, is evidence of wasted labor. If the piles contain cull sticks the waste of labor is still greater. A tree suspected of being unsound should be tried in several places by the sawyers but not sawn through unless sound. Careless sawyers saw wood too long or too short. Large knots sometimes interfere with sawing. In that case the bolt should be sawn a little longer rather than always shorter.

Contractors generally measure every few days to see what their crews are sawing per day. Some crews are paid by the cord for peeling and sawing, the wood being measured in the woods.

Road Making

Road making is a comparatively short job. The lay of the land decides for the experienced man the location of his main road. There is a multitude of branch roads. In locating these the contractor has to limit himself to as few roads as possible, for beside the cost of making, there is the cost and trouble of breaking them out in deep snow. On the other hand, he must manage to pass his road by each pile or else have his men carry the wood to the road before snow fall. It is disastrous to leave piles of wood far from the road to be brought out in three or four feet of snow. Good pilers foresee the location of the road and place the wood on it, even if they have to carry the wood some distance.

In light stands of pulpwood it is not practicable to make many roads, consequently wood is yarded, that is, horses are put in to drag the timber in tree lengths to places along a proposed road, where the sawing is done. As compared with sawing at the stump, sawing in yards results in fewer roads, larger piles, and speedier sawing. On the other hand, yarding entails the extra cost for horse labor, driver, and sometimes for a swamper to make a path.

When the stand is from two to four cords to the acre, yarding is best. In rough country it is sometimes best to yard even in fair stands. All roads must be well blazed or there will be trouble in finding branch roads in deep snow. A small crew is used for road making. Hauling ought to begin as early as possible. The jobber who hasn't taken much pains with his roads has to wait until there is a great deal of snow to make hauling possible over his rough roads.

Soon after there is snow enough there is usually too much. Deep snow wears out horses in breaking roads, and it invokes much shoveling out of piles. As the snow deepens the roads rise high above the bottom of the piles. Lifting heavy bolts from the bottom of a hole onto sleds is slow, hard work.

Swamp roads are likely to be flooded at every thaw, consequently it is not a good plan to count on late hauling in such situations.

The usual rig for hauling is a set of sleds upon which a rack is placed, the rack has stakes at the four corners and the bolts are piled across the poles of the rack, that is, crosswise of the road. Peeled pulpwood is slippery and will slip off the load at the first opportunity. Binding chains are used sometimes. Two cords are usually a good load for a two horse team. The use of one horse hauling rigs still continues in some regions, but is giving way to two horse teams.

Piling the Wood

Pulpwood is usually piled on the river bank, but sometimes on the ice. The height of the piles is either four or six feet, rarely eight. Skids are placed under the piles unless wood is piled on the ice. Space permitting, it is preferable to pile but one tier on either side of a river. When more than one tier is piled on one side of a river, space must be left between tiers for inspection of wood. The more tiers there are the farther away from the river the wood is, of course. When jobbers are obliged to throw the wood in themselves at driving time they are usually careful not to have wood too far from the stream. In fact they are apt to place the wood just as near as they are allowed. Some companies require the contractors to do the throwing in and others have the throwing in done by drive crews, or by separate contract.

Piling wood on the ice has the advantage of eliminating the throwing in, but on many streams it is not good policy because it makes driving costly. In spring jams of ice dam the stream and then the pulpwood floats over low banks and makes "rear" to be picked up. When the rolling is included in the contractor's work twenty-five cents is held back for rolling. Contractors do not like to do the rolling, as it requires them to hire men for a few days only, at a time when such men wish to be river driving.

Of the cost of operating this year there is not much that can be definitely stated, for it is not at all uniform even in the same localities. On the whole contracts have been let at great advances over last year. For instance, a contract that would have been given for four dollars last year calls for about seven this year. For piling and sawing four and four-fifty is being paid, and even more.

In conclusion, the writer wishes to state that after ten years' experience in having wood made by contract, he has found it a business requiring force, constant watchfulness and honest dealing to make the contract system work out satisfactorily.

Details of the organization for letting contracts, inspecting, scaling, driving and loading, the writer has left for a later paper.

Upsetting Old Ideas of Logging

Are scientific methods and mechanical improvements to be forever debarred from logging operations? asked D. C. Magnus, at the recent Appalachian Logging Congress.

"Are we, as loggers, keeping pace with the other great industries of the world? Is it not a fact that the lumberman is being outstripped by his own industrial competitors? He must do more of the work with power-driven machines.

"For instance, the sickle, the knitting needle, the old hand-looms, the needle and thread, the coal pick, and the cross-cut saw were all rocked in the same cradle. The sickle has developed into a reaper, the knitting needle into a great factory filled with humming spindles, the needle and thread into a sewing machine, the coal pick into a coal cutter, and the old cross-cut saw has remained a hopeless case all these years.

"Is it possible for the old cross-cut saw to form an armor that cannot be pierced by the scientific brains of this age?

"The cross-cut saw is not the only tool to which we should bow our heads in shame. Several weeks ago we were moving earth for a railroad grade and found a kit of stone tools that were used by some prehistoric race. Among the number there was a stone axe. This axe was similar to the one we use to-day, with the exception of being stone and having the handle attached on the outside. Is it possible that we must cling to that old stone model forever Should we not make some great effort to get an electrically-driven tool to replace at least a part of its uses

"We are living in an age when it requires a number of individuals

to compose an efficient unit. The backwoods cabins are becoming landmarks and the cave of the hermit a curiosity.

"Co-operation and concentrated effort must be introduced if we would have our ideals become realities.

"The loggers realize that they can't compete with the other industries. They should begin now to fortify themselves against the future labor problems which are sure to come.

"The time has passed for a lumberman to be content to have a man at the helm of the logging end of the business who is not worthy of a greater title than 'bush man.'

"A shrewd business man said to me after going over a logging operation: 'I am surprised to learn of the responsibilities of a logging superintendent. To be efficient he must be a timber cruiser, machinist, civil engineer, diplomat, and psychologist.'"

"The lumberman's slogan should be 'Scientific logging,' and he should put forth every effort to get men to conduct it on scientific lines."

Making Life Pleasant for Camp Communities

Sometimes, when the permanency of a logging camp renders it possible, great results are obtained by providing generously for the welfare of the loggers, in ways that at other camps are not possible. A case in Idaho is typical, where a community by the name of "Rose Lake" has been called into being by the lumber industry.

As the group of people thus drawn together grew, it struck the resident manager that an industrial Y. M. C. A. would help business, because happy, contented folks work to greater profit than the other sort. So he made application to the Industrial Secretary, who sent him a man to start the work and remain in charge. That was last October, and the Secretary's report now contains some interesting facts that show what a small sum of money can do.

From one hundred and five last November, the membership had reached one hundred and eighty-three in June, this increase gives an addition of twenty-seven men members; 100 per cent. increase in boys' membership with a growth of the ladies' auxiliary from ten to forty-eight.

The money which did this was only $3,468.42, of which the employer furnished a thousand dollars, the employees the balance, which includes $700 raised by the men to equip the building for its numerous activities.

In April a moving picture machine was purchased from funds in the treasury which, together with the rental of films from May to June, came to $283.90.

Bowling and basket ball are popular with both men and women, who learn to play well under the training of the Secretary, who is also physical director. The bowling alley report shows a total of 13 989 games played during the ten months' life of the association.

For the happiness of the women folks the manager installed a complete bath room for their exclusive use—theirs and the children. Few homes in a place like Rose Lake can boast of a bath with hot and cold water, so the mother-members bring the children to the Y. M. C. A. to enjoy that necessity.

The Secretary's wife is organist or pianist, as the case may be, at the religious services held every Sunday in the auditorium. A minister comes to assist every other Sunday and every Sunday the Secretary teaches a bible class.

An Enormous Log Jam in Sweden

Canadian lumbermen know a great deal about log jams, and Canadian loggers can tell an endless line of stories about them, but it looks as though they will all have to give first place to the great log jam that is now worrying all the lumbermen on the Glommen River, in Sweden. A quantity, estimated at about 450,000 dozens of logs, have piled up at Bingfoss lock, almost inextricably, to an enormous height, and it is only possible to extricate the logs one by one with immense work and difficulty. Instead of employing as usual about 20 to 30 men, the association has now 130 men engaged, who work day and night to try to loosen this mighty mass of timber. Although everything has been done to stop more timber from coming down to Bingfoss, the river still carries a great deal of timber, and the quantity at Bingfoss is thus steadily increasing. As the situation now is, it is hardly possible to clear the quantity of timber at the Bingen lock in a shorter time than two years, and there is no prospect of being able to release this year much more than one-half of the quantity of timber which has been marked this season for being floated in the Glommen River. This very serious situation will prevent not only the mills, but also the many parishes who have bought timber in lieu of coal, from receiving the timber which has been cut and marked for their account for being floated in the Glommen River. This is an event without parallel since floating of logs in the Glommen River commenced, and it will affect the planing mills at Fredriksstad and all the other mills which are situated on the Glommen River.

Extensive Quebec Manufacturers

St. Maurice Paper Company's Lumber and Pulp and Paper Plants—Two Thousand Men Employed in the Woods

Among the lumber and paper companies of the Province of Quebec, one of the most extensive and well equipped is the St. Maurice Paper Company, Limited, successors to the Charlemagne and Lac Ouareau Lumber Company, the Gres Falls Company, and St. Gabriel Lumber Company, Limited, with head office in Montreal.

The timberland holdings of the company exceed 1,300,000 acres, and are situated on the St. Maurice, Assomption, Ouareau and Mastigouche Rivers, with saw and pulpwood mills situated at Three Rivers, at the mouth of the St. Maurice River; Charlemagne, at the mouth of the Assomption; and St. Gabriel de Brandon, on Lake Maskinonge.

Under normal conditions their annual cut on these rivers amounts to about 65,000,000 ft. B.M., including pulpwood for their new pulp and paper mills, which are situated at Cape Madeleine, about three miles from Three Rivers. Practically all is cut by jobbers, and is chiefly spruce and white pine. It is estimated that a force of 2,000 men is employed in their woods operations.

On the St. Maurice River the logs are driven by the St. Maurice River Boom and Driving Company, Limited, which drives all the logs made on this river and its tributaries, from La Tuque to Three Rivers, the total quantity driven annually being about 200,000,000 ft. B.M.

The company's lumber mills are equipped with the most modern machinery, that at Three Rivers being built in 1915, replacing one destroyed by fire. Its equipment consists of double cut and band saw, twin circulars, circular band, horizontal re-saw, edgers and trimmers. The lumber is hauled by an electric locomotive over a tramway 700 feet long to the piling ground, whence shipments are made by car and ocean steamships.

The pulpwood mills are all equipped with cutting up saws, Ryther and Pringle slashers, barking drums and other modern machinery for cutting and preparing pulpwood. St. Gabriel and Three Rivers have direct railroad connection with the paper mill, and the wood from Charlemagne is transported by means of a tug and a fleet of barges of 360 to 400 cords capacity.

The combined capacity of the lumber mills is 350,000 ft. B.M. daily and the pulpwood mills cut up 750 cords daily.

The pulp and paper mills at Cape Madeleine are just completed, and consist of the wood room, equipped with two Carthage chippers with conveyor feed arrangement, horizontal shaking screens, and long belt conveyors leading to the chip bins in the sulphate and sulphite mills.

The sulphate mill, with the recovery and alkali rooms, includes in its equipment Swenson evaporators, melting furnaces, revolving incinerators, disc evaporators, etc., six diffusers and two digesters (Continental). The capacity of this mill is 60 tons daily.

The sulphite mill is equipped with two Manitowoc digesters with Jolbert lining and the usual accessories. The acid plant is in a separate building, containing lime and sulphur storage, rotary sulphur burners, coolers and complete barker reclaiming system. The capacity of this mill is also 60 tons daily.

The ground wood mill is entirely electrically driven, the three lines of five grinders each, 15 in all, being each driven by a 1200 h.p. motor. The stock is pumped to the screen room, which is fitted with vertical quiller screens. Excess of ground wood not used in the paper mill is taken off eight Sherbrooke wet machines and hydraulically pressed. The daily output is 100 tons.

The paper mill is equipped with two Pusey & Jones 166 in. paper machines with 60 in. dryers, running at 635 feet, driven from the basement with a drive of the English cotton rope type, each machine being driven with a Terry steam turbine. The capacity is 100 tons daily.

The boiler house contains six 500 h.p. B & W water tube boilers with superheaters, chain grate stokers, Greene fuel economizers, etc., and overhead storage bunkers of 700 tons capacity.

Much of the equipment in the different plants of the St. Maurice Paper Company consists of the well-known machinery furnished by the Waterous Engine Works Co., Ltd. Brantford, Ont.

Mr. J. O. Castle, manager of the factory of Castle & Son, makers of shell boxes and furniture, Montreal, died on July 24, after a short illness.

A change has taken place in the personel of the Graddon Lumber Company, Ltd., Montreal. Mr. C. B. Graddon, president of the company, has purchased the interests of Mr. W. T. Owens and Mr. James Buchanan, the latter of whom has been ordered a rest for three months, owing to illness.

Quebec Cullers' Report

The following comparative statement of timber measured and culled to date is furnished by the supervisor of cullers, Quebec, P.Q., under date of August 6:

	1915, cu. ft.	1916, cu. ft.	1917, cu. ft.
Waney white pine	341,680	118,960	84,240
Oak	90,880	221,400	70,400
Elm	46,840	69,440	98,640
Ash	840	1,680	320
Butternut	.....	40	.....
Birch and maple	48,880	46,880	15,880
Pitch pine	.....	.....	41,230
Fir	.....	.....	36,490

Link-Belt Mono-Rail Hoists Again Available

The Link-Belt Company, who have factories in Chicago, Philadelphia and Indianapolis, and sales offices in the principal cities of the United States, report that they are again able to furnish Link-Belt Mono-rail Hoists for quick shipment. For about a year past they have been unable to produce this line, on account of the over-crowded condition of their shops and the unprecedented business conditions.

The Link-Belt Mono-rail Electric Hoists are manufactured by this firm at their Philadelphia plant, where a large additional building is rapidly nearing completion, and the excellent manufacturing facilities of the plant are being greatly increased. One of the accompanying illustrations represents a partial line up of C-1 machines in the assembling department. Both types C-1 and C-2 machines can now be furnished. Their safe lifting capacities range from 1,000 lbs. to 6,000 lbs. They can be adapted for either direct or alternating current and fitted with plain, hand geared, cord-operated motor or a case-operated motor trolley.

The company report that there is an unprecedented demand for electric hoists and a great probability that the available stock will be exhausted quickly. Practically every industry in the country is now working at top-notch capacity and electric hoists are helping to expedite production everywhere. The entrance of the United States into the great war will increase the use of all such labor saving appliances, which will do the work of many men who are called to the front.

Another illustration represents a direct current plain-trolley hoist handling boiler cores in a foundry, before they have been baked. The company claim that the Link-Belt hoist is the first Mono-rail machine to employ a dynamic braking system for controlling the lowering speed. Dynamic lowering provides the delicate variable speed control that is so essential in foundry work of this kind.

Among the other good features of this hoist are the small amount of head room required; the weatherproof and dustproof construction; the accessibility of the working parts; the simplicity and ruggedness of the hoist gearing; automatic oil bath lubrication; renewable bronze bushings throughout and its safety-first construction.

The third illustration represents a hoist handling pulleys in a pulley manufacturing plant. Other machines are working in ice plants, boiler houses, machine shops, steel plants, coal tipples, etc. In one paper mill eight C-1 machines are used for handling rolls of paper. In another a cage operated hoist is employed for handling ashes from the boiler room to the cars. Other mills are using them for handling cars of wood pulp, casks of clay and miscellaneous materials.

The Link-Belt Company have a new electric hoist catalogue on the press and will be glad to send copies to interested parties upon request.

The Canadian representatives of this company are the Canadian Link-Belt Company, Limited, 265 Wellington Street West, Toronto.

Canada's Foreign Trade in Wood Goods

Canada's imports of planks, boards, etc., sawn, split or cut and dressed on one side only during the twelve months ending March, 1917, were valued at $1,326,851. During the corresponding twelve months of 1916 the value was $1,007,330, and for 1915, $2,322,368.

Pitchpine imports during the same periods were valued as follows:—1917, $644,812; 1916, $722,358; 1915, $1,608,788.

The total imports of unmanufactured wood during these three periods were valued as follows:—1917, $7,209,242; 1916, $5,459,118; 1915, $9,803,975.

The total value of imports of wood and manufactures of wood during the three years was as follows:—1917, $11,489,761; 1916, $8,672,422; 1915, $14,495,093.

Canada's exports of spruce and other deals during the twelve months ending March, 1917, were valued at $10,354,628. During the corresponding period ending March, 1916, the value was $9,679,385, and for 1915, $6,393,420.

Exports of planks and boards during these three periods were valued as follows:—1917, $25,982,442; 1916, $23,885,932; 1915, $18,939.295.

The total exports under the heading of lumber during the twelve months were valued as follows:—1917, $47,586,148; 1916, $43,363,332; 1915, $33,239,679.

The total value of exports of unmanufactured wood during these three periods was:—1917, $56,352,330; 1916, $51,627,977; 1915, $43,076,250.

The total exports of wood and manufactures of wood for the three periods were valued as follows:—1917, $77,797,498; 1916, $63,456,058; 1915, $53,284,085.

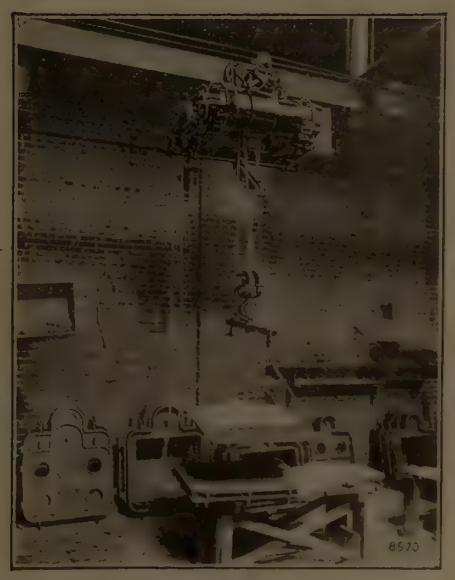
Canada's exports of forest products during the twelve months ending June were valued as follows:—1917, $56,518,595; 1916, $53,259,354; 1915, $43,288,935.

Teeth of band saws that are too long chatter in the cut and sometimes cause fractures by throwing undue strain on the blade at the root of the teeth. Never let the saw come in contact with the back guard wheel, as case hardening is bound to ensue, from which cracks will surely result. In case saw is forced against the guard wheels and case-hardened, remove the glaze at once by holding a piece of soft emery wheel against the back edge while saw is slowly running, or by draw filing.

Lumber shipments by twenty-five mills as reported to the Northern Pine Manufacturers' Association, amounted to 91,989,217 feet for June, as against shipments of 99,703,922 feet by thirty mills in June of last year. The shipments for the first six months of the present year were 426,867,626 feet, as against 497,077,614 feet for the first half of 1916.

Link-Belt Mono-rail Hoist handling pulleys in a factory.

In the assembling room—a partial line up of C-1 machines.



Handling boiler cores in a factory.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) $2.10 per inch, each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 20th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Squares Wanted

Seasoned Birch and Maple, No. 1 Common, also 1sts and 2nds. Size 5 x 5 and 6 x 6.

Huntley Mfg. Company, Limited.
15-16 Tillsonburg, Ont.

For Sale–Lumber

Lumber For Sale

300,000 ft. B.M. 1 x 4 and up Clear and No. 1 Spruce.
400,000 ft. B.M. 2 x 4 to 2 x 10 Spruce. Piled widths and lengths separate.

GEO. C. GOODFELLOW,
c Montreal, Que.

Oak Bending Plank

We can cut and ship promptly three or four cars per month of good tough oak bending or implement plank any thickness you need. Write us.

C. W. TUNIS LUMBER CO.,
16-16 Cincinnati, Ohio.

For Sale

100,000 ft. 1 in. dry Cull Birch.
150,000 ft. 3 x 6, 6/16 ft. dry Sixth Quality Spruce.
200,000 ft. 1, 2 and 3 in. C. Cull White Pine.

FRED T. SMITH,
310 Board of Trade Bldg.,
14-17 Montreal, Que.

For Sale–Machinery

For Sale

Band saw-mill machinery in our Saw-mill at Lakefield, Ont. Two complete units. Shafting, pulleys, three boilers, etc. For particulars apply The Dickson Co., Ltd., Peterborough, Ont. 15-18

For Sale

Corliss Engine, Waterous Engine, Steam Pump, Hot water Heater, Steam Trap.

DELANEY & PETTIT, LTD.,
16-16 Toronto, Ont.

For Sale

43 Steel Trucks, 2 Transfer Trucks, with flat steel tops, 36-in. gauge, roller bearings; 360 yards 30-lb. rails. All good as new. Apply Room 622, Transportation Building, Montreal. 16-16

For Sale

One latest improved Wickes No. 10 52-in. Gang, complete with saws and filing equipment, 1 Kilgore Cant Crane, Steam Board Flippers.

GOODMAN LUMBER COMPANY,
15-t.f. Goodman, Wis., U.S.A.

Machinery and Dry-Kiln Outfit For Sale

Planer and Matcher.
Power-feed Rip-saw.
25 H.P. Motor. d.c.
Heavy Door and Sash Clamp Glue Heater.
Grand Rapids Dry-Kiln Outfit (never been used)

HALEY & SON,
15-t.f. St. Stephen, N.B.

For Sale
Logging Railroad Equipment

Five hundred tons relaying rails and fastenings, mostly 56 lb.

One Shay gear locomotive, 70 tons (coal, wood or oil burning).

One Shay geared locomotive, 40 tons.

Two steam log loaders (derricks).

One Raymond Gasoline Log Loader.

Forty flat cars, 60,000 lbs. capacity, with air brake equipment.

One Empire Logging Donkey Engine (from Vancouver). Unloads a half car of logs at one time. Very powerful.

And other material, all in first class condition. Located in Ontario. Delivery September to November, this year.

GEO. H. HOLT,
926 Manhattan Bldg.,
16-17 Chicago, Ill.

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

WANTED POSITION as woods foreman or licensed log scaler. Best of references. Box 1105, Welland, Ont. 16-17

EXPERIENCED ACCOUNTANT wants position as clerk in a logging camp. Apply Box 614, Canada Lumberman, Toronto, Ont. 16-16

PRACTICAL LUMBERMAN, experienced salesman and capable office man is open for immediate engagement with reliable wholesale firm or manufacturer. Good references. Box 608, Canada Lumberman, Toronto, Ont. 15-16

A PRACTICAL LUMBERMAN, forty years old, with twenty years' experience, is open for engagement June 1, 1917. Last ten years with very large Canadian firm as superintendent and sales manager. Best of references. Box 496, Canada Lumberman, Toronto, Ont. 2-18

WANTED POSITION as Band Saw Filer or mill superintendent, having 25 years' experience on band saws and mill wright. Will go anywhere for yearly position. Can furnish gilt edge reference. Age 46. Can speak English and French fluently. Box 609, Canada Lumberman, Toronto, Ont. 15-18

WOULD LIKE TO HEAR from some saw mill owner who needs the service of a competent and reliable mill man who has had twelve years' experience in manufacturing in up-to-date mills; also would be willing to invest some capital with good people. Box 613, Canada Lumberman, Toronto, Ont. 16-20

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

WANTED MAN to take charge of Planing Mill. One who is capable of setting up machines, filing and grinding pattern knives. Address Drawer F., Sarnia, Ont. 13-t.f.

Business Chances

Sawmill For Sale

Complete Sawmill for sale, cheap and easy terms. Capacity 20,000 feet per day. Field Lumber Company, Limited, Field, Ont. 11-t.f.

Saw Mill For Sale

Complete Sawmill with timber rights and freehold lands for sale. excellent shipping facilities. Mill situated County of Shefford, with a visible supply of soft wood and hardwood timber in the neighborhood for an extended life. Address P. O. Box 222, Waterloo, Quebec. 16-t.f.

For Sale

Timber Limits and Sawmill, estimated fifteen million feet of hardwood and ten million feet soft woods. Sawmill capacity 25 M. feet, shingle mill 125 M. Docks, tugs, booms, logging outfit, houses, etc. Price $35,000

The Manitoulin Lumber Co., Ltd.,
11-22 Walkerville, Ont

Saw Mill For Sale

For quick sale, Saw-Mill complete, capacity 20,000 feet per day. Or will sell parts separately. Also two Pulpwood Loaders complete with Upright Boilers and Engines, capacity 500 cords each daily. All machinery in excellent condition. For further particulars apply The James Horrigan Company, Limited, Port Arthur, Ont. 15-18

Jobbers Wanted

We wish to let several contracts to take out logs on Berth No. 6, being broken front lying between the Magnetawan and French Rivers. This berth is all convenient to Canadian Northern Railway.

John Harrison & Sons Company, Limited,
Saw and Planing Mills,
9-t.f. Owen Sound, Ont.

For Sale

Sawmill, Planing Mill and Assets of the North Star Lumber Co., located at Elko and Hanbury, B.C., on the Crow's Nest Pass Railway. Capacity of mill, 50,000 ft. per ten hours. Practically new, having sawn less than twenty million feet. As the affairs of the above company are being wound up there is a real bargain in sight. Apply I. HANBURY, Vancouver, B. C., or R. W. RIDDELL, Coleman, Alberta. 15-15

Mill Plant and Limits For Sale

43 Miles Limits on 31 Mile Lake, Gatineau Valley, containing Basswood, Spruce, Fir, Pine, Cedar, Birch, Maple and Pulpwood.

New Waterous 8 ft. Improved Double Cut Band Mill complete. Steam Alligator, Boats, Sleighs, Wagons, Harness, etc. For further particulars apply to

A. W. STEVENSON,
P. O. Box 2624,
8-t.f. Montreal, Que.

Miscellaneous

BIG SNAP!
Fifty to Sixty Million Feet of Timber

White Pine, Yellow Pine, Fir, Larch, Spruce and Cedar. Large quantity Cedar Poles. Purchased seven years ago for $32,500. Now worth over $50,000. For quick sale will accept $25,000 cash. Write to Grand Forks Lumber Co., Grand Forks, B. C. 15-16

PROVINCE OF QUEBEC

Department of Lands and Forests

Quebec, 2nd June, 1917

Public notice is hereby given that, in conformity with the law, on the 21st of August next, at 11 o'clock a.m., at the office of the Minister of Lands & Forests Dept., Quebec, there will be offered permits to cut timber on lands belonging to the Crown in the Upper-Ottawa, Lower-Ottawa, St. Maurice, Lake St. John, East and West, Saguenay, Rimouski West and Bonaventure West agencies, comprising several large blocks in the Abitibi, Upper-Ottawa and head waters of the St. Maurice and Gatineau and on River Chamouchouan.

Permits will be adjudged to the highest bidder.

The price of adjudication is payable in 3 equal instalments.

The permit to cut will be subject to the ordinary conditions of the Law and Regulation and the grantees of any of the aforesaid territory must, within a delay of three years, manufacture, in the province of Quebec, with the timber cut in said territory, either pulp or paper in the proportion of ten tons per day, or sawn lumber in the proportion of ten thousand feet board measure per day, per hundred square miles.

Further information may be had by applying to the Department of Lands & Forests.

Elzear-Miville Dechene,
Deputy-Minister,
13-16 Dept. of Lands & Forests.

FOR SALE

Kootenay District, B. C.

STANDING TIMBER

Cedar	24,500,000 ft.
Spruce	17,500,000 ft.
White pine	17,000,000 ft.
B. C. fir	1,100,000 ft.

Lies on Jordan River. For quick sale will accept $20,000 for this block. Annual rental only $400. Government dues 50c per M. when timber is removed. Above quantities guaranteed.

We have other larger blocks of choice Western timber to offer.

J. E. MURPHY,
26 and 28 Adelaide St. W.,
Toronto, Ont.

15-t.f.

Saw Teeth for Wide Band Saws

The outline of the saw tooth must conform to one or two rules if rapid and good work is to be obtained, together with a long life to the saw. Amongst the most important are:

1. Strength. The tooth must be capable of withstanding the heavy strain to which it is subjected, without breaking or cracking. With this end in view, the back of the tooth should be rounded, and the gullets made of circular form, the curve commencing well up the face of the tooth.

2. There must be ample, but not excessive, room in the gullet to carry away the sawdust.

3. No sharp corners should appear in the gullet, or anywhere except at the point. This is important, as sharp corners are a fruitful source of cracks.

4. The tooth should be of such a form that it will stand a considerable amount of hook. For this purpose the rounded back is an advantage.

The outlines above referred to conform with the above rules, and, generally speaking, are suitable for any class of timber if the hook and depth of gullet is varied to suit. The correct amount of hook which should be given to the tooth is a matter of great importance, and has received considerable attention of late.

It is well known that saws when ripping should act on the wood much in the same way as a joiner's hand-chisel does when used to pare off a shaving of wood.

To obtain this action considerable hook must be given to the front of the tooth, and it is evident if the tooth is to remain equally strong that a well-rounded back to the tooth permits of a greater hook than is possible with a straight back.

Of course, excessive hook can be given, with the result that the saw will take the feed too greedily and tend to travel forward on the saw-pulley. A more usual fault, however, is to give too little hook, with the result that the saw scrapes rather than cuts, and if the feed is at all pressed, tends to move backwards on the pulleys.

For soft woods the limit of hook which can be given with advantage is governed more by the resultant strength of the tooth than anything else, as before the hook is excessive for the work the teeth will become too weak, chatter, and shake in the cut.

Rather less hook and slightly shallowed teeth may be used for very difficult and hard woods, such as teak and quebracho, or if the wood is very knotty. The exact amount of hook given must be left to the judgment of the sawfitter, who must, from his own experience, determine the most suitable angle for the front of the tooth, under different circmstances.

Airplanes Require Much High-Grade Spruce

Congress has appropriated six hundred million dollars for the development of aviation and the training of a large force of American flyng men to win the war through permanent preponderance in the air. The plan calls for something like 30,000 airplanes during the next twelve months.

From a practical viewpoint, American lumbermen are interested in the big program, because it means many millions of feet of high-grade lumber for the construction of airplanes and other craft and much larger quantities for the construction of many aviation training camps throughout the country. The plan contemplates the conversion of some of the leading automobile plants, or parts of them, into airplane factories.

About 1,000 feet of lumber, largely high-grade spruce, is required for the wooden parts of the type of machine now constructed in this country. If a decision is reached to confine American construction for the present to training machines, thus enabling the British and French to turn out only battle planes, 30,000,000 feet of lumber would be required for the 30,000 machines planned for the next twelve months. If a quantity of much larger and more powerful machines are built, the consumption of lumber will be greater.

Small Amount of Potash from Sawmill Ashes

Dr. Curtis H. Twing, of the University of Washington, has been examining the ashes found in the incinerators of lumber mills in the Northwest, with a view to conserving the potash from the ashes. From a summary of the results of his researches it is learned that he found the flue dusts contained only about 7 per cent. The reason why this was so slight a proportion and the amount of ash was so small was that the type of incinerators in use calls for a strong draught, and this causes a good deal of the potash to go off in smoke. Dr. Twing did not see how the present incinerators could be improved upon so long as the present methods of lumbering obtain.

"Of course, the amount of wood that goes to waste in the lumber industry is a scandal and a shame to all of us, but until we have worked out ways of using the vast waste of sawdust, small branches and slats, there is no use in blaming the lumberman." And from the review in question, it hardly seems likely that the lumber manufacturers will furnish us with potash.

Union Lumber Co.

Limited

White Pine
Red Pine
Spruce
Red and Jack Pine
Lath

Union Lumber Co., Limited

701 Dominion Bank Building
TORONTO, CANADA

British Columbian Pine

The supply of this wood, owing principally to tonnage difficulties, is hardly sufficient to meet the demand. The shortage of labor in Canada has also a lot to do with the present scarcity of British Columbian pine, and the free-on-board value of the wood is advancing on this account. Prices, in fact, have been moving rapidly during the last few months, and they will probably continue to do so until the end of the war can be more clearly seen. America coming into the war will probably influence prices for all British Columbian productions, especially for the higher grades of spruce coming from that part of the world. Canada has, in more ways than one, been very useful to us during the war. She is not only providing the Mother Country with men of the best description, but also with the most essential wood used in the construction of another type of "fighting machine."—The Timber News.

Wood's Density Retards Decay

The Southern Pine Association has pubilshed conclusions reached by Dr. S. M. Zeller after two years of investigation regarding the decay of wood. It is claimed that wood with wide growth rings decays more slowly than that of narrow rings, if a large part of the ring consists of dense, dark wood. The fungus which is responsible for decay does not work energetically in the dense wood which represents the growth which the tree puts on late in the season. This fact should be borne in mind in selecting timber for foundations or to be used in any situation where decay is likely to be active. —Hardwood Record.

PHILIP T. COOLIDGE
FORESTER

Technical training and ten years' experience. **Timber Estimating and Mapping. Supervision of Lumbering Contracts. Surveying. Forest Planting.**

Stetson Building, 31 Central Street
BANGOR, MAINE

Review of Current Trade Conditions

Ontario

Everyone in the lumber trade today reports that business is quiet and some are feeling a bit depressed about it; but the fact of the matter is that these firms have very short memories and fail to recall that the months of July and August are quiet ones in the lumber trade every year. In fact, quietness is normal during the midsummer months. Moreover, the trade has really no reason to feel anything but satisfied with the present situation because in other years the midsummer quietness is often accompanied by sagging prices, whereas this year, prices are all strong, with an advancing tendency, which is easily understood by anyone who knows anything about the quantity of stock available at mill points and the condition of retail yard stocks throughout the province. Practically every line that one can mention is strong on account of scarcity and good demand. This applies to both domestic and imported lumber. There is nothing in the way of activity to report in connection with the building trade, although a moderate amount of business is taking place. The manufacturing industries using wood are all busy. The shell box business is more active than it was a few weeks ago, new contracts for considerable amounts having been let recently by the Imperial Munitions Board. These contracts were for the Bethlehem box and the price is $1.45. Previous contracts were at $1.35. The advance is on account of the increased cost of materials and labor, but is not sufficient to compensate the manufacturer for these. Higher prices for this box are expected on further contracts.

British Columbia stocks at Ontario points are in good demand and available stocks are low. Fir timbers were recently advanced $2 per thousand feet. Other prices are unchanged. The strike in British Columbia saw and shingle mills may have a further strengthening effect upon prices, but everything will depend upon how long it continues. Shingle stocks in Ontario are low and a long continued strike, interfering with deliveries from the coast, will reduce these stocks seriously. Hemlock continues strong. Trade with the United States is quiet, but steady.

The logging season in Northern Ontario is commencing and operators are going into the woods on quite an extensive scale. The general belief is that prices of lumber next year cannot fail to be higher than those of the present year and that manufacturers will be able to get back the increased cost of operating. Just at present there is a fair supply of labor for mills located in towns, but those that are in outlying districts are having trouble and have to advance wages continually. Even then they are unable to hold a sufficient crew all the time.

Exporters to Great Britain are not inclined to think that the recent removal of the embargo upon deck loads of timber will be of benefit to them. Such deck loads as it will be possible to ship will be furnished by exporters located at the ports of shipment. Moreover, a deck load is only permissible when the ordinary cargo in the vessel does not weigh her down below the Plimsoll line. As all cargoes today contain large quantities of munitions, the Plimsoll line is reached before there is any question of taking on a deck load, so it is scarcely expected that the permission to devote deck loads to timber will be of much value.

The lumber trade at Ottawa shows no important change, but all are expecting a good volume of business in the fall. This applies to both the retail and wholesale trade. Conditions today are considerably better than they were a year ago. Low grade stocks at Ottawa Valley mills are prety well disposed of, some mills being completely sold out. Dry stocks are becoming scarcer and some retailers have been taking green stock direct from the saw. Prices are all strong, and slight advances are reported in connection with all grades of pine strips, 1 in. x 7 in., also box boards, mill culls, strips and sidings. The demand from the United States is increasing and the prospects for further improvement are bright.

Eastern Canada

Although this is usually a quiet time in the trade at Montreal, wholesalers report that orders are fairly plentiful. Business with the United States, and from other outside points is compensating for the falling off in the building trade in Montreal. Local retailers, however, are purchasing lumber more freely. Building permits show an increase for the month and for the year to date. Hardwoods are quiet. The strike situation in B. C. is upsetting trade in B. C. products. Shingles are scarce and prices are changing daily. Shipments of stock to Great Britain are light, and consist almost entirely of spruce. There is a good demand for pulpwood, and prices are high. The sulphite and ground wood markets are quieter. This is their dull season.

At St. John, N.B., there have been no shipments of lumber during the past fortnight for trans-Atlantic business and there is scarcely any outlook for shipments in the near future. A few English buyers are reported to have commenced figuring upon the 1918 cut, but no sales are taking place as yet. Prices of deals must be higher in 1918 if they are to cover the greatly increased cost of production. Stumpage, labor, food and equipment have all advanced greatly in price, and pulpwood buyers are competing strongly for farmers' logs. The American market is uncertain and most prices have shown some slight falling off with the exception of boards. There is an excellent demand for boards and prices are higher, while stocks are very low. The quantity of deals or dimension produced at St. John this year will be small. Shingles are also easier in price for the American market, but for the local market they are strong. The local factory business at St. John is very active, but men for the benches are scarce. Local prices are strong.

The spruce market at Boston is fairly firm in all lines, but the demand from the retail yards has been rather light. The base quotation for frames shows no change. Random prices are reported to have eased off a little on account of Canadian spruce manufacturers seeking to dispose of surplus stocks on a quiet market. Boards are very strong, offerings being light and promptly taken up. At New York, spruce prices are still firm, but a little below the higher quotations which prevailed a month ago. Stocks are scarce and mills are still working on government schedules. The yard trade is rather quiet, because of the falling off in the building trade. The shingle business at boston has been quiet, but quotations are fairly well maintained. The uncertainty in regard to the supply of red cedar shingles caused by the labor situation on the Pacific Coast is helping sellers to maintain prices. The market for lath is quiet and somewhat easier than it was a short time ago.

Great Britain

The import season in Great Britain has now reached its height and practically all the large importing centres are extremely short of stocks. London, the largest of all the importing centres can only show a few thousand standards of sawn goods, and a few thousand of planed boards, floorings, matchings, etc. Roughly the stocks represent only about as much as one leading house would have contracted to bring forward between the commencement of the season and the middle of July. Similar conditions prevail in all the other large importing centres, and in the smaller ports, particularly, no timber at all has been received from abroad. The recent arrangements for importing stocks from Scandinavia are not producing extensive results. Many serious obstacles interfere with this trade and there is seldom any profit in it for the importer. A few more steamer cargoes of softwoods have recently arrived at London from the west coast of Norway and from Sweden. For 3 x 9 unsorted redwood and whitewood, the price asked has been £48 10s. per standard. For other lines the prices asked have been £47 for 3 x 7/8 and £43 for 2 x 4 up to 3 x 6. These figures are for the goods lying in the docks or at a wharf in London. Excessive as these prices may appear at first glance they are said to include very little for the importer. Norwegian flooriings are being quoted at 45s. to 46s. per square of 100 superficial feet, for 1 x 7 boards, in the docks. It is interesting to note that the selling of planed goods at London on the basis of 100 superficial feet has now become universal. Importers are speculating as to whether, at soft wood auctions in future, consignment parcels will also be sold on this basis.

No change of importance has taken place lately in the trade at Liverpool. The scarcity of spruce stocks is keenly felt, but there has been an increased enquiry for Scandinavian sawn goods in deals and battens. A full steamer cargo of this class of goods, including a small consignment of planed white boards, was discharged recently at Liverpool, and the bulk of it went direct into consumption. A sailer cargo of spruce deals and scantlings, containing approximately 480 standards reached Liverpool a short time ago, but was not expected to find its way into private hands. The government, it was thought, would take it over at an early date. Apropos of the reported relaxation in the embargo upon imports from Canada, it is interesting to note that Liverpool importers are not entertaining any great hopes of an ap-

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

preciable volume of Canadian or United States stocks finding their way to that port under the new arrangement. They believe that the whole tonnage difficulty must be solved before the trade will reach any important size. Once this question has been settled and the importation of spruce renewed, it is counted upon to have an immediate effect upon the high prices prevailing for Scandinavian stocks.

A little more activity is reported in the timber trade at Manchester. Several sailers have reached the Mersey with spruce, pitch-pine and Scandinavian cargoes and according to latest reports these had not yet been acquired by the government buyer, though it was considered probable that in the end they would reach that quarter. Negotiations are on foot also for further imports in sailing vessels. Iicenses to import in this class of vessel, particularly if in neutral boats, are being granted a little more freely.

United States

The general business and agricultural situations in the United States are very encouraging. Crop prospects, as a whole, were never better and business in general is more brisk than usual at this time of year, chiefly on account of the enormous amount of buying that is being carried on by the Government. In connection with southern pine, the government requirements are still the most important market feature, and are keeping the mills very busy. Yard buying has also increased in some sections. Some retailers, however, are holding off in the expectation that when the government buying for cantonments is out of the way the mills will be more ready to take on their orders. It should be borne in mind, however, that the cantonment orders are only a portion of what the government will require, very large quantities being needed also for other purposes arising out of the war.

There is a normal midsummer demand for white pine, and stocks are small. It is probable that the supply of white pine will not be extensive during the balance of this season. Labor troubles are decreasing production and embargoes are keeping shipments from reaching their markets, so that prices continue firm in all grades. The best demand is for high grade stock suitable for patterns and for the better grades of shop. There are indications of a revival in the retail buying of white pine, particularly in those sections where the crops are already pretty well assured. The labor situation is the most important element in connection with the Inland Empire trade. Although conditions have quieted down to some extent recently, a number of mills are not running, and shipments have been curtailed. There is a good demand for western pine and it is increasing steadily. Stocks that are suitable for box shooks, and also the upper grades are in strong demand. All prices are firm.

The trade in white pine at Buffalo is not quite so active as it was a few weeks ago, but a fair amount of pattern lumber and low grades is being used. The retail trade is not so good as it was last year, and building is very quiet. Prices are firm and stocks are moderate. Heavy receipts of white pine are reported at North Tonawanda recently. In most cases the lumber is being moved out rapidly to consumers. Prices are strong, particularly for low grade stock. Buffalo reports a fair demand for hemlock, but the volume of sales is not as large as a year ago. The crop outlook is excellent and improved buying of hemlock is expected before long. Prices are firm. North Tonawanda dealers report plenty of orders for hemlock to keep them busy. Much of this trade is coming from manufacturers, who are using hemlock for a great variety of purposes. The general opinion is that at the close of navigation there will not be much stock on hand in the yards.

The hardwood trade at Chicago is characterized chiefly by a heavy demand for war purposes, such as production of motor trucks, wagons and other vehicles. Otherwise, trade is seasonably light. All prices are firm. Hardwood manufacturers are counting upon a good demand this fall and a continued high range of prices. Stocks are below normal and labor is gradually becoming more scarce both for the woods and the mills. At Buffalo, the hardwood trade is not quite so active, but prices are firm.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Ottawa Trade Expecting Good Fall Business

Ottawa, August 7.—(Special to the Canada Lumberman.)—No great change has been experienced in the Ottawa lumber market during the past two weeks, but all indications point toward a good fall business for both the retail and wholesale trades. In comparison with the corresponding period last year the lumbermen agree that conditions are somewhat better, and that the market has shown a considerable improvement. In this group of lumbermen, however, must not be included John R. Booth, whose large export lumber business is practically at a standstill because of the enforcement of the British embargo. The Canada Lumberman is informed that John R. Booth may shut down his lumber mill at Ottawa. At present it is only working in the daytime. Before the war it operated with heavy night shifts. Piling ground is another matter of concern with the Booth plant. During the week of July 28 to August 4, Mr. J. R. Booth renewed his fight in the City Council for continuation of his use of the northern end of Bronson Avenue as a piling ground. This ground gives him shipping facilities on the Ottawa River. The city, on the petition of property-holders, intends to open up a street to the river.

A large percentage of this season's mill cut of the lower grades of lumber has already been disposed of. The Shepard & Morse mill is completely sold out of these grades, and its whole season's cut of all kinds of lumber is largely bought up or contracted for. Stocks of dry lumber are getting smaller, but there has been no evident scarcity as yet. While some of the green cut came on to the retail market nearly a month ago, it was because the retailers took it straight from the saws. The green lumber proper, the manufacturers say, is not yet ready for shipping, and will not be for another three or four weeks. Lumber manufacturers, it appears, are seeking to secure all the wood they can get, and saw it, pile it, and dry it. One of the reasons is the possibility of a great shortage of labor for next years' operations. Mill owners are weighing the possibilities of a labor shortage through the enforcement of the Canadian Compulsory Service Act, and apparently think it wise to obtain as much stock as possible this year, as next year they may not be in such a favorable position to do so.

There have been no decrease in prices for the last month, as stocks have not been large, nor have operating costs declined. All grades of pine strips from 1 in. to 7 in. have advanced in price, along with box boards, mill culls, strips, and sidings, 1 in. x 4 in. and up.

An increased American demand is asserting itself, and many orders and enquiries are being received. Practically all the export business that is being done by the manufacturers at present is to the United States, and for the first two weeks of August, as compared with the similar period of July, business has picked up considerably, and prospects for a continued increase in American orders appear bright. It is difficult to get the manufacturers to state how much they are shipping weekly to the United States. Offhand they do not care to give even approximate figures, but many cars of lumber are going from Ottawa mills to destinations in the United States every week. W. C. Edwards & Co., Ltd., are among the heaviest shippers to the United States, and at present a large percentage of their business is constituted by American orders. The company report that their mill is having a good season. Recently female labor was introduced, between fifty and seventy-five girls being employed for mill work. According to Mr. S. C. Thompson, manager of the company, the new class of labor has been satisfactory so far. "They are always on the job," is the manager's comment regarding the girls and their punctualtiy in getting down to work on time.

There has been no outward sign of uneasiness with the plants manufacturing shell boxes, but it is reported that some apprehension is felt as to how they will be kept busy when contracts for shell boxes cease. Announcement was made some time ago that the imperial authorities had decided to make no further contracts for shells in Canada. This would end the demand for shell boxes, and a great quantity of lumber of the grades required would become available to the market. One usually well posted member of the lumber trade states that no more contracts for 9.2 shell boxes will be given. The latest orders secured by a local firm were for Bethlehem boxes and the smaller size 6.2 box.

St. John Export Shipments at a Standstill

St. John, N.B., Aug. 6; (Special to the Canada Lumberman):—The past two weeks have been the most stagnant at this port, in regard to shipping of lumber, of any time during the past two years. Practically no lumber has been loaded on ship at St. John for across the waters, and at the present moment there is no prospect of shipments. No sales have taken place for 1918 business and there is no talk of any as yet, although it is said that the English buyers are

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From our many years of experience we evolved this "Dunbar" Original Lath Machine. Every improvement that could be suggested, every time-tested idea for the betterment of product and for greater speed, has been incorporated in this machine. We believe it has no equal, and there are a great number of mill men throughout Canada who share this belief with us. Carefully constructed of high grade materials and designed to work steadily under the hardest conditions.

Steam and Gasoline Logging Engines

Conditions in Canada necessitate an engine that will stand any amount of strain and hard work in the lumber industry. With this idea in mind we have brought out the "Dunbar" engines perhaps a little stronger than is really needed. They do their work easily and willingly, and stand a great amount of hard usage. Built entirely in Canada for the Canadian lumber trade.

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You will need no excuse for the quality of your product if you use the original "Dunbar" Clapboard Machine. Expert in every detail. This machine will give you the very best service under most trying conditions. It will turn out work without delays. It will need practically no repairs and will increase your output. We cannot recommend it too highly because it is giving this very service to lumbermen in all parts of this country.

Send for catalogues of any or all of these machines.

Dunbar Engine & Foundry Co.

WOODSTOCK, N.B.

beginning to do some figuring. The price for deals must certainly be higher in 1918 than during the past year. Positively everything that enters into the getting of the log is increasing in price month by month. First of all, the price of stumpage in New Brunswick has doubled, including the government dues. All farmers' lots are being taken at fabulous prices by the pulp buyers, who are now flocking this way, and unheard of offers are being made for pulp lands of all kinds. Food and labor have also doubled in price. Therefore, the buyer must pay a larger price for deals or the operator must remain idle all through the coming winter, as he will not leave himself open to such a risk as would mean ruin, to undertake operation unless he knows his price beforehand. A greater scarcity of man power is also being felt than ever before. Men who always have gone to the woods in past years now get double wages in the cities and refuse to go.

In the American market a feeling of uncertainty is beginning to show itself. Prices of all stocks of lumber, excepting boards, have receded, in some cases $3 per M. Boards are in great demand and prices are higher than ever before, with practically no stocks available. The mills at St. John are, in some cases, nearly done sawing and all are half through. So it can be seen that so far as St. John is concerned the quantity of deals or dimension will be so small that it will have practically no effect on the market abroad or at home. Shingles are following along in a downward trend, as far as the American market is concerned, but locally they are very strong

Locally the factory business during the past season has been as good as it has since the war broke out. During June and July the factories all over the city had more business than they were able to care for. Men to work at the benches are very scarce, and the average turn-out is very poor. Stocks of low grade lumber are very scarce and prices locally are very high.

The Shipping Situation at Parrsboro, N. S.

Parrsboro, N.S., Aug. 10.—(Special to the Canada Lumberman.)—Only one small cargo of deals (less than half a million superficial feet) has been shipped from this vicinity this season for a port in the United Kingdom, and that cargo failed to reach its destination. Late last fall the Parrsboro tern schooner Coral Leaf loaded deals here for a British port. While waiting for a chance down the bay she dragged her anchors in a heavy gale, and was driven ashore. As she lost part of her keel and sustained other damage, she was towed into port, where the cargo was discharged and repairs made. The parties who bought the cargo insisted that it be delivered, so the deals were reloaded and the vessel sailed. When off the coast of Ireland she was shelled and set on fire by a German U-boat. The crew escaped in the boats, and the vessel was subsequently towed into Castletown by a patrol boat, but presumably neither vessel nor cargo was of much value. The master arrived home a fortnight ago.

Two importations of spars from Seattle, Wash., were delivered here last month for the three-masted schooners building on this shore. Each lot consisted of ten spars and occupied three flat cars. The freight bill in each case was about eleven hundred dollars, and there was a war-tax of between eighty and ninety dollars on each importation. The spars were of Douglas fir, sawed eight sides, and were about 90 feet long.

A fine three-masted schooner of 435 tons register was launched at Spencer's Island on August 4. This is the first to be ready for launching of the fleet of tern schooners building along this shore and to be registered at this port. She was built for C. T. White & Son, of Apple River, one of the leading lumber firms of the county. The firm has quite a fleet of vessels, and this one was intended for their own use, but they have sold her to Australian parties, who have come far afield in their search for tonnage. The new vessel will take a cargo of gypsum from Windsor to New York, where she will be delivered to her new owners. Another vessel of about the same tonnage will be launched for Messrs. White this week.

The deal trade with the United States is developing slowly—very slowly. Three tern schooners have loaded deals here for United States ports this season, the last of the three sailing to-day. One of them cleared for Philadelphia, the other for New York, and more may follow before the season is over. Whether the trade will ever develop into anything worth while remains for the future to disclose, but a beginning has been made, and a profitable trade is among the possibilities.

Montreal Experiencing Active Outside Trade

Montreal, August 7.—(Special to the Canada Lumberman.)—Generally speaking, trade is satisfactory. This is usually a very quiet period, but wholesalers state that orders are coming in well, and that

No Sawmill however small, is complete without a TOWER EDGER

It increases the output of a mill one-third.

It relieves the main saw of a great deal of work, leaving it free to perform its proper function of cutting up logs; and, when the log is disposed of, the edging is also done.

It makes more merchantable lumber per log.

It wastes the minimum quantity of material, saving considerable No. 1 lumber that is lost when the edging is done with the main saw.

It raises the grade of the lumber, removing hearts, shakes, and knots, making firsts and seconds out of commons, and so cutting up every board as to make it as valuable as possible. For example, a board that will grade as No. 2 may be ripped so that one piece goes into the No. 1's and the other into the No. 2's.

It gives the boards straight and parallel edges.

It makes them of standard or any desired special widths, and automatically cuts them scant, exact, or plump, as desired.

It is also used extensively for ripping.

Built in

83 Sizes and Styles 83

This enables you to select a machine perfectly adapted to your requirements and your pocketbook.

HUNDREDS IN USE IN CANADA AND THE STATES.

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Manufacturers of

The Gordon Hollow Blast Grate and the TOWER Line of Edgers and Trimmers.

TEAS

BLACK Teas have got to such very high prices that we have made up a range of Blends which are giving splendid satisfaction.

We would like you to ask us for samples, and feel that once you see the quality you will be desirous of securing some for your camps.

On the other hand, if you prefer Japan or Mixed, we have a full line of all kinds, and will very much like to hear from you.

Chests	No. 40 Blend	- - -	.35
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"	" "	Mixed - -	.24
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The cost of installing plant is small and you make a sure profit from waste material.

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Over One Year on Sticks

8/4 Firsts and Seconds, 4 cars.
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16/4 Sound Boxed Hearts, 5 cars.
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1916 Sawing

2 x 4 x 10/16 Merchantable, 4 cars.
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1917 Sawing

1 x 4 up 6/16 Merchantable, 10 cars.
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2 x 6 x 10/16 Merchantable, 5 cars.
2 x 7/8 x 10/16 Merchantable, 8 cars.
2 x 9 x 10/16 Merchantable, 1 car.
3 x 4 up 10/16 Merchantable, 30 cars.

If any of the above interest you, will be pleased to quote prices

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202 Board of Trade Building

MONTREAL

while there is not a great deal going on locally in the way of construction, this is made up for by business from the United States and from other outside points. Retailers are also purchasing more freely. In the Province of Quebec a certain amount of uneasiness is caused by the conscription bill, buyers holding their hands until they can gauge the effect of the measure more accurately.

The building permits for July are better. The total was $877,195. For the seven months the amount was $3,311,539, an increase of $331,325.

The hardwood section of the trade is quiet. There is still a good demand for pulpwood, with prices very high. The outlook is towards stiffer values, on account of the shortage in labor, which will make its effects more acutely felt during next winter. Farmers, who have received unprecedented prices for their wood, are said to be very independent in their attitude towards buyers, and are inclined to limit production.

Some fair orders for British Columbia timber for shipbuilding purposes have been received. A very large business has been done for this branch, although it is stated that the bulk of the orders have now been placed for the vessels given out by the Imperial Munitions Board to shipbuilders in the East.

A letter received by a Montreal wholesaler from a prominent manufacturer in the West gives a gloomy picture of the shingle situation on the coast. Owing to the activities of the I.W.W., 85 per cent. of the shingle mills in British Columbia are closed, and there is fear of the strike spreading to the logging camps. The British Columbia shingle market is very uncertain, and prices are changing daily.

Only a small quantity of lumber is being shipped to the United Kingdom, this consisting practically all of spruce. It is reported that Quebec firms are sending a considerable amount of square timber for government account.

The sulphite and ground wood markets are much quieter. This is the dull season, and prices have reacted slightly under the slower demand.

New York Market Quiet

Simpson, Clapp & Co., New York, report under recent date as follows: There is very little to report, except a very dull market. We are in the midst of the usual midsummer slump, and there have been no regular enquiries put out for some time. Recent arrivals of Maritime Province cargoes have sold at prices considerably under former levels, and laths are hard to sell. Government requirements have been almost entirely provided for, both for cantonment and shipbuilding, and, with the gradual readjustment of business, we hope to see late in the fall a more normal outlook, based on actual trade enquiry and requirements. We hope, also, to see the freight market fall to a level which will make vessel shipment an industrial possibility rather than an extravagance encouraged by shortsighted competitive bidding.

Spruce Deal Situation at Liverpool

The Timber Trades Journal, of London, Eng. discussing the spruce deal market at Liverpool, Eng., in a recent issue, says:—There is still a state of inaction in the c.i.f. market, although those interested are now awaiting the result of the consideration of the powers that be regarding the letter forwarded by the Liverpool Timber Trades Association. The time is passing, and if anything at all is to be done this season, it must be done without any further delay. There is no disputing the fact that the goods are available for shipment, and although the freight difficulty is a serious one, no doubt it can be overcome. The spot market is in a very perilous state, and consumers are almost at their wits' end as to where to obtain their requirements. Many have been advised to obtain them from native timber, but their efforts in this direction have met with very little success. The plain, bald facts are that at the end of the present month an absolute famine in softwoods will be more than demonstrated even to the most casual observer, and we cannot understand why things have been allowed to drift on in the way they have done. Practically the whole of the consumption is required in connection with the work for carrying on the war to a successful termination, and the absence of the material is in itself a serious menace. Cases could be cited where contractors having direct government contracts are unable to find the wood for the work on the market, and are unable to obtain release from requisitioned stocks. It must be presumed that the contracts have been made for the purpose of carrying on the war, and therefore the absurdity of the position is the more striking. At this time of the year most importers have made their contracts for the bulk of their imports, and such would have been the case this year except for the unnecessary import restrictions imposed.

The opinion is generally held that had the restrictions enforced not been so drastic, the Scandinavian shippers would not have been in the happy position they are to-day.

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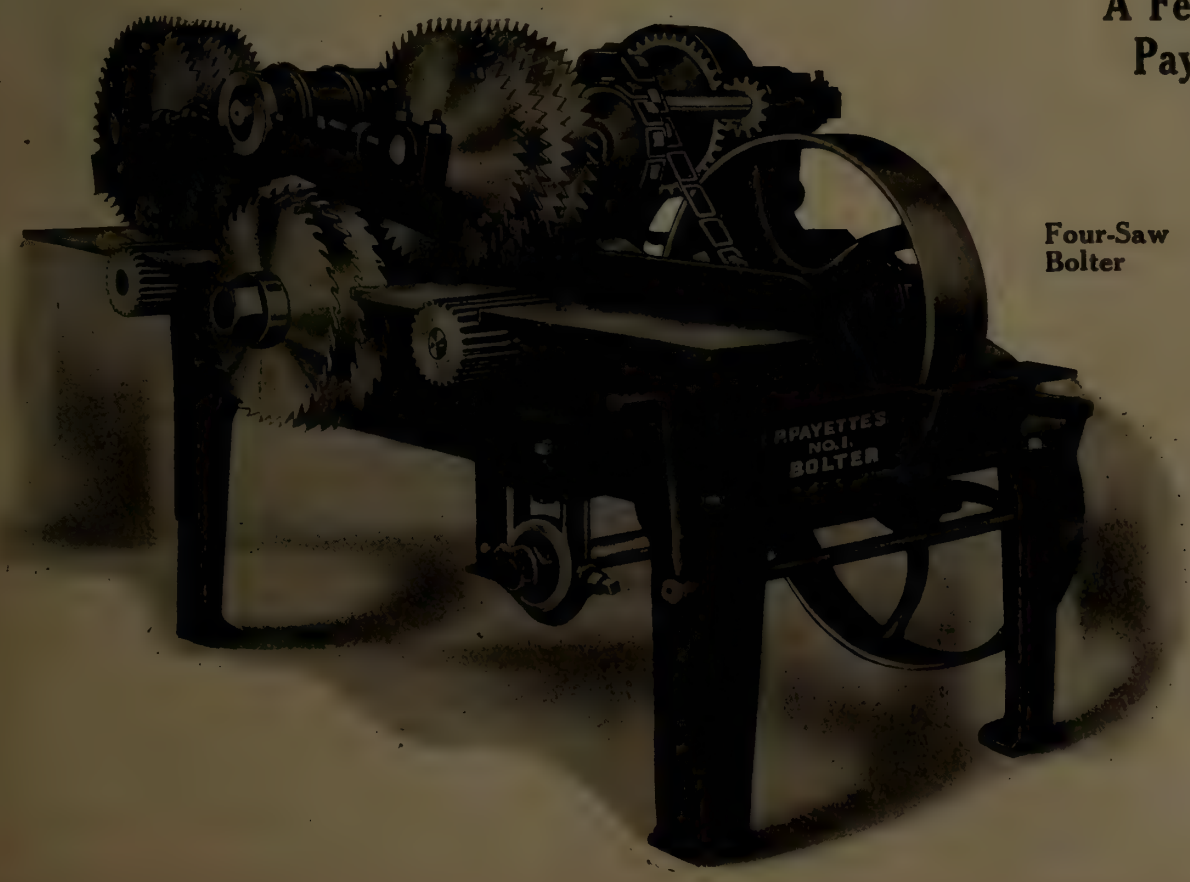
Our Lath-Mill and Bolter have made a test cut in ten hours of 128,350 four foot laths, 1½ in. by ⅜ in., counted, tied and piled.



Four-Saw Bolter

A Few of the "400" who use Payette's Lath-Machinery:

Graves, Bigwood Co., Byng Inlet, Ont.
Victoria Harbor Lumber Co., Victoria Harbor, Ont.
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Colonial Lumber Co., Pembroke, Ont.
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Wm. Milne & Sons, North Bay, Ont.
C. Beck Mfg. Co., Penetanguishene, Ont.
Manley Chew, Esq., Midland, Ont.
Chew Bros., Midland, Ont.
James Playfair Co., Midland, Ont.
McFadden & Malloy, Spragge, Ont.
Pembroke Lumber Co., Pembroke, Ont.
Petawawa Lumber Co., Ltd., Pembroke, Ont.
Firstbrook Box Co., Penetang, Ont.
Gres Falls Lumber Co., Three Rivers, Que.
Foley Bros. & Northern Coast Co., Scot, Ont.
Spanish Mills Lumber Co., Ltd., Cutler, Ont.
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Engineers and Machinists,

PENETANGUISHENE, ONT., CAN.

J. T. Payette, Prop.

Lessening the Cost of Lumber

The cost of the rough lumber in the yard, and of the amount of lumber necessary to turn out a given piece of work, may be two very different things. It is right here that the purchasing agent may blunder grievously. The lumberman comes along and tells Mr. Purchasing agent that he has a lot of second-quality quarter-sawed oak which he can sell at $4 a thousand less than the stock that the purchasing agent is now buying. "Of course, there are some few knots that you will have to cut out, but these will not amount to as much as the saving." Our friend jumps at the chance; thinks that he is making a saving of at least $2 or $3 a thousand after allowing for the knots.

There is only one way to know what the actual saving is, and that is to keep an individual lumber account for each order which goes through. When an order is received, the cost clerk estimates the amount of material required, sends out the cutting bill and an order for the required stock. Now, in the ordinary shop and at the cut-off saw there are several piles of lumber. The cut-off man simply fills the order from this without paying any attention to the number of boards he cuts up, hence there is no record of the number of feet of purchased lumber.

In some factories the cut-off bill, in place of going to the cut-off saw first, goes to a man in charge of the lumber. He measures up the required amount of lumber, puts it on a truck with the cut-off bill and sends it to the saw. He knows that there should be at least a half-board over or some other indefinte amount. Now, if no great loss results from discarding knots and other irregular parts, everything will come out all right, but if the man at the cut-off saw has to discard a large number of pieces he will come out short.

In many cases he will simply slip over to the pile of left-overs from previous jobs and pick out enough scrap to finish the order. Or he will slip out into the yard and say, "Bill, you will have to let me have another board on that last order; you were a little short." He will take the board from the pile, carry it in and cut it up without making any record of it. In either event the purchasing department has no knowledge of the actual amount of lumber entering into a given piece of the manufactured product.

When comparing different grades of lumber it is necessary to measure the rough stock accurately and to determine just what is the average loss. I know of certain firms making a careful study of this subject. They have found "soft spots" in the lumber market; these soft spots may be located in positions where they would least be expected. In one case, where the stock had to be cut into fairly long lengths, the soft spot was found in the highest-priced lumber, which was actually from $4 to $6 a thousand cheaper than the lower grades when the number of dollars' worth of lumber necessary to turn out the finished product was accurately determined.

As a general rule, the longer the pieces of stock to be cut the more necessary the use of high-grade and clear stock. For short work the lower grades frequently work in to advantage, and good saving may sometimes be made by their use. The average woodworking plant is so busy turning out product that it has no time for detailed study, taking into account the matter of first cost of lumber and its effect upon the amount of time that must be spent upon a given job. When lower grades of lumber are used and a considerable amount of material discarded, there should be considered the extra time necessary in handling the larger amount of lumber in the yard, through the dry kiln, over the cut-off saw, and of hauling away the discarded blocks.

A careful inquiry of this kind will frequently make a saving that will show a distinct profit on the finished piece. Of course, this applies more particularly to outside or finish lumber. Core stock may vary through a wide range, for certain classes of material anything that is sound can be used in the cores.—The Woodworker, Indianapolis.

In very high speed band saws it is apt to happen that vibration is increased with speed, distortion tension is increased by vibration, and fracture of saw by both. Besides high speed and the attendant vibration being a cause of fracture, there is an added cause, the constant impact of the saw against the wheel, the constant bending and straightening, the constant tensional and torsional strain on the saw, all working in conjunction with the defects that may exist in the blade itself, either by fitting or innate defects,

---

If the tension approaches too near the edge of teeth of band saws, fracture may result. If a saw has fast and loose spots in it, the tendency to crack is largely increased, the fast spot cracking from undue tensile strain, and the loose spot from constant buckling of surplus metal.

THE MOST OF THE BEST FOR THE LEAST

DON'T STINT "THE BOYS" BUT BUY THEIR FOOD CLOSELY

MINCE MEAT
JAMS and JELLIES
BUTTER
EGGS
EGG PRODUCTS
CHEESE
RAISINS
CURRANTS

BESIDES being manufacturers ourselves, we buy from the leading markets of the World and can consequently offer you a range that, in quality and price, few houses in Canada can equal.

While you, of course, cannot afford to stint your men, you have got to watch your costs. You have to buy from that house which can give you the greatest possible value for the least money expended.

In this regard we can be of mighty valuable assistance to you. Write us.

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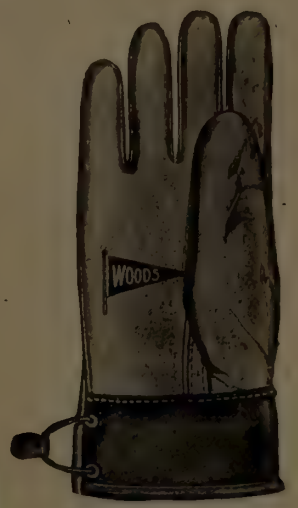
Lumbermen's and Railroaders' Clothing

Guaranteed Pure Wool Mackinaw Coats, Pants, Shirts, Mitts, Socks, Underwear, Etc., of the Highest Grades

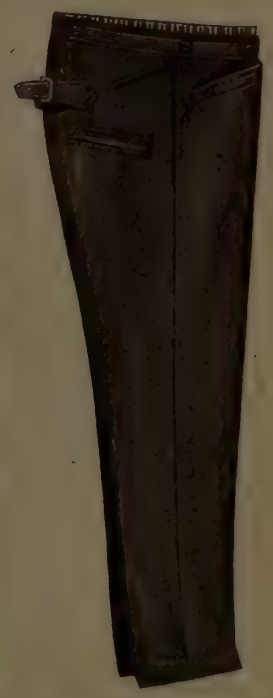
Plain and Fancy Pure Wool Mackinaw Coats, with high seven-inch collar, close fitting, with tab at throat. Sizes 36 to 46.

Smart-Woods Home-made Handknit Wool Mitts, as cut. Generous sizes, perfectly proportioned. For use with large fitting pullovers.

All-Wool Long Stockings, as cut. Black or fancy striped or checked.



Our Special Muleskin, Calfskin and Horsehide Gloves have fully reinforced cuffs and are heat and wetproof. Ask for samples and prices.



Men's Heavy Pure Wool Mackinaw Pants, as cut. Black, Khaki, and Olive-Green shades. Generous sizes, well made.

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Send Post-card, Name and Address

Smart-Woods LIMITED

Ottawa — Toronto
Montreal — Winnipeg

JENCKES BOILERS

Boiler Room of Dryden Timber & Power Co., Dryden, Ont., containing six 78 in. x 20 ft. Jenckes Tubular Boilers.

Enquiries addressed to our nearest sales office will receive prompt attention.

for prompt shipment subject to prior sale.

72 x 18	H. R. T.	Boiler	150 lbs. Ont.
60 x 16	"	"	135 " "
60 x 14	"	"	125 " "
2—60	H.P.	Loco. Type	125 " "
2—50	H.P.	" "	140 " "
2—50	H.P.	" "	125 " "
2—50	H.P	" "	120 " Alta.
3—30	H.P.	Vertical "	100 " Ont.
6—25	H.P.	" "	100 " "
8—20	H.P.	" "	100 " "
4—15	H.P.	" "	100 " "
3—12	H.P.	" "	100 " "

The Jenckes Machine Co., Limited

SHERBROOKE — MONTREAL 908 E.T. Bank Bldg. — COBALT — TORONTO 710 C.P.R. Bldg. — ST. CATHARINES — VANCOUVER 616 Standard Bank Bldg.

Works: SHERBROOKE, QUE.; ST. CATHARINES, ONT.

THE EAGLE LUMBER CO. LTD.
WHOLESALE LUMBER
SANS DIEU RIEN
MONTREAL, Canada
Head Office at Montreal.

SPRUCE
ROUGH or DRESSED

Saw Mills at
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2601 Elston Ave., CHICAGO, ILL.
Manufacturers and Dealers
White Pine, Red Pine and Yellow Pine,
Lumber and Lath
Excellent Planing Mill Facilities. Prompt Shipments.

Everything in Spruce
Dressed and in the Rough
Campbell, MacLaurin Lumber Co.
Limited
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SPRUCE AND **BIRCH**
GOOD STOCKS PROMPT SHIPMENTS SATISFACTION
C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber, Lath and Shingles
Offices—McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

Sarvice Limited, lumber dealers, Chatham, Ont., have obtained a charter.

The basket and berry box factory belonging to Geo. Rivers, Strathroy, Ont., was recently destroyed by fire. The loss amounted to $10,000. The owner will rebuild immediately and will be in the market for machinery.

Berth 201 on the north shore of Lake Huron has been sold by the Ontario Government to the Bishop Lumber Company, Nesterville, for 50c per thousand feet for pine and spruce, in addition to dues of $2 per thousand feet, and 15c per cord for the spruce pulpwood, in addition to 40c per cord dues.

John A. McIntyre, Rodney, Ont., is contemplating the erection of a planing mill, to replace the one recently destroyed by fire. Besides the planing mill a storehouse and office were destroyed, incurring a loss of $10,000. The owner will prepare his own plans. New machinery will be required.

A new lumber company has been formed in Pembroke, Ont., and has started operations. It will engage chiefly in the pulp wood business, and a gang of men is busy taking out spruce from the fifty miles of limits which have been acquired. The members of the new firm are W. L. Hunter, J. C. Hunter and W. B. Wilson.

A new shipbuilding company has been incorporated under the name of the British American Shipbuilding Company, Limited, with head office at Toronto, Ont., and capital stock of $1,000,000. Among those interested are A. A. Kinghorn, Excelsior Life Bldg., Toronto, Ont., and F. H. Keefer, Torold, Ont. The company will carry on general shipbuilding and contracting work.

A new shipbuilding company has been incorporated under the name of the Toronto Shipbuilding Company, Limited, with head office at Toronto, Ont., and capital stock of $100,000. C. S. Boone and J. J. Manley, 17 Adelaide Street East, are interested. The company will build and equip all styles of vessels. The yards, etc., will be located in Ashbridges Bay district and they now have a contract for two vessels.

A recent timber sale held by the Department of Lands and Forests of Ontario resulted in Township 1 A. Mississaga Forest Reserve being sold to McFadden & Malloy, Spragge, Ont., at the following rates: white pine $3 per thousand feet plus $2 dues, red pine $2 per thousand feet plus $2 dues, jack-pine and spruce $1 per thousand feet plus $2 dues, spruce pulpwood 25c per cord plus 40c dues, other pulpwood 10c per cord plus 20c dues, railway ties 5c plus 5c dues, cedar posts 2c plus 1c dues, cedar poles under 30 feet, 30c plus 15c dues; 30 feet to 40 feet, 30c plus 25c dues; 40 feet to 50 feet, 50c plus 50c dues; 50 feet and over, 75c plus $1 dues.

The Department of Lands and Forests of the Province of Ontario made a sale of the timber in the township of Sweeney on August 1st. The timber was sold in two sections. The west half of the township went to the Electric Planing Mills, Welland, in which Mr. Samuel Lambert is interested, the price paid being $6.55 per thousand feet, plus dues of $2 per thousand feet for the white pine, and $5.55 per thousand feet, plus $2 per thousand feet dues for the red pine. The east half of the township was sold to Leforest and Clemow, Sudbury, Ont., the price being $11.15 per thousand feet, plus $2 per thousand feet dues for the white pine, and $10.15 per thousand feet, plus $2 per thousand feet dues for the red pine.

The timber deal recently reported to have taken place between the Colonial Lumber Company as purchaser, and the Canadian Timber Company as seller, had not, up to the end of the first week of August, been formally and finally closed. There is little doubt that the deal, which includes the purchase of 330 square miles of woodland, known as the Magnissippi limits near Two Rivers, will be finally closed shortly. As matters stood during the first week of August the deal was practically through, but certain documents were not yet signed. The impression conveyed that the Fraser, Bryson Lumber Company has sold the limits was entirely incorrect, as this company deals in wholesale lumber, and has no limits. The Colonial Lumber Company agreed to purchase the limits from the Canadian Timber Company, of which Mr. W. H. A. Fraser is president. Further information as to the sale price and other details of the deal are not yet available. It is considered likely that the deal will be completed inside of the next month.

Eastern Canada

The Harvard Lumber Company, Montreal, P.Q., have been registered. Wm. R. Bruce is interested.

Fire recently destroyed the sawmill belonging to Gendron Plante, St. Victor de Tring, P.Q. There was no insurance.

Demers & Dodier, lumbermen, Thetford Mines, P.Q., have been registered. Jos. Demers and A. Dodier are interested.

The William Lyall Company, Montreal, P.Q., are entering the shipbuilding business. The Canada Gazette gives notice of the incorporation of

the William Lyall Shipbuilding Company, Limited, with capital of $1,000,000, and head office at Montreal.

The Belgo Canadian Pulp & Paper Company, River Side, Shawinigan Falls, P.Q., are contemplating the erection of a pulp and paper mill at Cap de la Madeline, P.Q. The manager is H. Biermans, care of the company, and he has an option on the property of the Burrill Lumber Company, near Highway Bridge.

The Log Supply Company, Limited, has been incorporated with head office at Montreal, P.Q., and capital stock of $50,000, to carry on business as lumbermen and timber merchants, and to manufacture and deal in logs, timber, lumber, etc. Among those interested are A. Falconer, Westmount, P.Q., C. G. Ogden, J. L. Reay, H. A. Ellis and J. L'Heureux, all of Montreal.

A severe flood in the Chaudiere River Valley, P.Q., recently caused considerable loss to timber owners. Booms were destroyed at the mills of the Brown Corporation, John Breakey, H. Atkinson, and B. C. Howard. A vast quantity of lumber and pulpwood logs was carried down the river and out into the St. Lawrence. A despatch to the Quebec Telegraph states that the loss sustained is estimated by one who is closely in touch with the situation at about $4,000,000, which is made up as follows:—Brown Corporation, $750,000; Breakey Company, $1,500,000; loss to farmers, $500,000; loss to merchants, $500,000. Highway bridges, public roads ruined and miscellaneous losses, $500,000; railway company's loss, $250,000.

Western Canada

Fire recently destroyed the sawmill belonging to Christenson Bros., Boundary Falls, B.C.

The mill of the Deer Lake Lumber Company, Vancouver, B.C., was receently destroyed by fire.

A. G. Lambert & Company, Limited, sawmill operators, Nelson, B. C., recently suffered loss by fire.

The lumber mill belonging to A. J. Lambert Company, Nelson, B.C., was recently destroyed by fire.

Fire recently destroyed a lumber camp and equipment belonging to the Elk Lumber Company, Fernie, B.C.

The lumber mill belonging to the Kootenay Shingle Company, Salmo, B.C., was recently destroyed by fire.

The Rainy River Pulp Company, which operates the mill at Port Mellon, Howe Sound, will about double the output shortly and will manufacture kraft paper.

The Swift Creek Lumber Company, Limited, has been incorporated with head office at Fernie, B.C., and capital stock of $20,000, to carry on business as loggers, lumbermen, sawmill proprietors, etc.

The Vernon Lumber Company, Limited, has been incorporated with head office at Vernon, B.C., and capital stock of $10,000, to carry on business as timber and lumber merchants, sawmill and shingle mill proprietors, timber and lumber exporters, etc.

The Vancouver Ship Yards & Engine Works, Limited, are contemplating the erection of ship yards at Vancouver, B.C. Work will likely be let by contract and tenders will be called shortly. S. Matheson, 517 Rogers Bldg., Vancouver, B.C., is the manager.

Mark DeCew and B. Lequime, veteran lumbermen, of Grand Forks, B.C., have purchased the machinery of the Western Pine Lumber Company, and will erect a new plant at Lynch Creek on the north fork of the Kettle River. The name of the new concern will be the Grand Forks Lumber Company.

The Alberni-Pacific Lumber Company, which is operating the plant of the Canadian Pacific Lumber Company at Port Alberni, is putting in a considerable quantity of new machinery. In addition to a heavy domestic trade, the firm is getting into the export business and will ship to Australia this year.

The Lumber Products Company has taken over the plant of the Iowa Lumber Company at New Westminster, and will operate a sawmill, planing mill, box factory and toy factory. The box factory will be the principal part of the new business. The toy factory will be an extension of that now operated at North Vancouver.

Sealed tenders are being received by the Minister of Lands for British Columbia, until the 29th day of September, 1917, for the purchase of License X1035, to cut 11,000,000 feet of ceedar and fir on an area adjoining Lot 913, New Westminster District, situated on Haslam Lake. Three years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 4th day of September, 1917, for the purchase of License X1041, to cut 12,000,000 feet of Douglas fir, spruce and balsam on lot 2677, Cariboo District, situated immediately south of Hansard Lake. Three years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for British Columbia, until the 31st day of August, 1917, for the purchase of License X829, to cut 3,250,000 feet of fir, cedar, hemlock and balsam on an area adjoining S. T. L. 43839, situated on Estero Basin, Range 1, Coast District. Two years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 6th day of September, 1917, for the purchase of License X862, to cut 1,300,000 feet of cedar, spruce, fir and hemlock on lot 3300, Kamloops district, situated south of Home Creek on the North Thompson River. Two years will be allowed for the removal of the timber.

Wholesale Lumber

The
McLennan Lumber Co.
Limited
MONTREAL, QUE.

The Bennett Lumber Co.
Limited
Solicit your kind enquiries for
Spruce, Pine and Birch
in all grades and thicknesses
American Hardwoods and Mahogany
11 St. Sacrament St., - MONTREAL, P.Q.
Long Distance Phone Main 812

H. BOURGOUIN
Dominion Express Bldg., 145 St. James St., Montreal
WHOLESALE LUMBER AND TIMBER
Dressed and Rough
White and Red Pine, Spruce, Hemlock, Banksian Pine, Birch, Maple, Dimension Cedar, B. C. Fir, Yellow Pine, Railway Ties, Fence Posts, etc.
Prompt shipment. Satisfactory stock. Good service Write for Prices.
A. F. B. AUSTIN, Manager

Saw Mill Exhausters
"By-Pass" Blower Systems are Indestructible
"By-Pass" exhausters will handle the green sawdust from your saw mill without clogging or trouble of any kind. Material does not pass through or around fan wheel. Fan is not overhung. Three bearings. No heating or shaking. The best and most economical system made today.
We manufacture and install systems complete
Write for information
The Toronto Blower Co.
156 Duke St., Toronto

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better	62 00	64 00
1½-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	52 00	54 00
4/4 No. 2 and 3 cuts		33 00
5/4 and 6/4 No. 2 and 3 cuts	38 00	40 00
8/4 No. 2 and 3 cuts	40 00	42 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	35 00	36 00
1 x 6 common and dressing	37 00	39 00
1 x 8 common and dressing	38 00	40 00
1 x 10 common and dressing	40 00	42 00
1 x 12 common and dressing	43 00	45 00
1 x 10 and 12 mill cull stocks	30 00	31 00
1-in. mill cull sidings	27 00	28 00
5/4 and 6/4 x 4 m.r., m.c. out.	35 00	36 00
5/4 and 6/4 x 5 m.r., m.c. out.	35 00	36 00
5/4 and 6/4 x 6 m.r., m.c. out	35 00	36 00
5/4 and 6/4 x 8 m.r., m.c. out.	36 00	37 00
5/4 and 6/4 x 10 m.r., m.c. out	42 00	43 00
5/4 and 6/4 x 12 m.r., m.c. out	44 00	45 00
2 x 10 common	36 00	38 00
2 and 3 x 12 common	39 00	40 00
1 x 8 box and common		33 00
1 x 10 inch box and common.		35 00
1 x 12 inch box and common.		35 00
1-in. mill run sidings		35 00
1-in. mill run shorts		28 00
1-in. mill run Norway		30 00
2-in. mill run Norway	33 00	35 00
Norway, c. and cf. 1-in.	38 00	40 00
Norway, c. and cf. 1½-in.	39 00	41 00
Norway, c. and cf. 2-in.	39 00	41 00
Spruce mill run 1-in. and 2-in.	31 00	32 00
Spruce mill culls	26 00	27 00

Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft.		23 00
1 x 6-in. x 9 to 16 ft.		27 00
1 x 8-in. x 9 to 16 ft.		28 00
1 x 10 and 12 in. x 9 to 16 ft.		29 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		26 00
1-in. No. 2, 6-ft. to 16-ft.		20 00
2 x 4 to 12, 10 and 16 ft.		27 00
2 x 4 to 12 in., 12 and 14 ft.		27 00
2 x 4 to 12-in., 18 ft.		30 00
2 x 4 to 12-in., 20 ft.		32 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		22 00
Clear in. B.C. cedar, kiln dried	50 00	55 00

Douglas Fir:	
Dimension Timber up to 32 feet:	
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	42 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16	43 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.	43 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.	44 00
10x20, 18x20, up to 32 ft.	44 50
6x18, 8x18, up to 32 ft.	44 50
6x20, 8x20, up to 32 ft.	44 00
Timber in lengths over 32 feet subject to negotiation.	
Fir flooring, 1 x 3, edge grain	43 50
Fir flooring, 1 x 4, edge grain	46 50
Fir flooring, 1 x 4, flat grain	39 50
No. 1 and 2, 1-in. clear Fir rough	50 75
No. 1 and 2, 1¼ and 1½ in., clear Fir rough	56 00
No. 1 and 2, 2-in. clear Fir rough	52 00
1½-in. No. 1, 4-ft. pine lath.	6 00
1½-in. No. 2 4-ft. lath	5 70
1½-in. 32-in. pine	2 75
1½-in. No. 1 4-ft. hemlock lath.	4 50
1½-in. mill run hemlock lath.	4 25
XX B. C. cedar shingles	3 35
XXX 6 butts to 2-in.	4 45
XXXXX	4 95

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	$65 00	71 00
Ash, white, No. 1 common		45 00
Ash, brown, 1sts and 2nds, 4/4		57 00
Ash, brown, com. and bet.		45 00
Ash, brown, 1sts and 2nds, 6/4 and 8/4		65 00
Birch, 1st and 2nds, 4/4		55 00
Birch, No. 1 com. and bet., 4/4		47 00
Birch, 1st and 2nds, 6/4 and 8/4		65 00
Birch, 1st & 2nds, 10/4 and 12/4		78 00
Birch, 1st and 2nds, 16/4		85 00
Basswood, 1sts and 2nds, 4/4		53 00
Basswood, No. 1 com. and bet., 4/4	45 00	47 00
Basswood, No. 2 and 3 common		28 00
Basswood, 6/4 and 8/4, 1sts and 2nds	58 00	60 00
Basswood, 6/4 and 8/4, com. and bet.		48 00
Basswood, 4/4, No. 2 com. and bet.		42 00
Soft elm, 1sts and 2nds, 4/4		48 00
Soft Elm, No. 1 com. and bet., 4/4		43 00
Soft Elm, No. 2 and 3 common		20 00
Soft Elm, 6/4 and 8/4, 1 and 2		60 00
Rock Elm, 1sts and 2nds, 6/4 and 8/4		65 00
Rock Elm, No. 2 com. and bet., 6/4 and 8/4		45 00
Soft Maple, 1sts and 2nds, 4/4		48 00
Soft Maple, com. and bet., 4/4.		38 00
Soft Maple, 6/4 and 8/4, 1sts and 2nds		55 00
Hard Maple, 1sts and 2nds, 4/4		47 00
Hard Maple, com. and bet., 4/4		42 00
Hard Maple, 12/4, 1sts and 2nds	65 00	70 00
Hard Maple, 16/4, 1sts and 2nds	85 00	90 00
Red Oak, plain, 1sts and 2nds, 4/4		64 50
Red Oak, plain, No. 1 com., 4/4		44 50
Red Oak, plain, No. 2 com., 4/4		33 50
Red Oak, plain, 1sts and 2nds, 6/4 and 8/4		70 00
Red Oak, plain, 1sts and 2nds, 12/4 and 16/4	77 00	85 00
White Oak, plain, 1sts and 2nds, 4/4		
White Oak, plain, No. 1 com., 4/4		44 50
White Oak, plain, No. 2 com., 4/4		33 50
Red and White Oak, plain, 1sts and 2nds, 5/4 and 6/4	65 00	68 00
Red and White Oak, plain, No. 1 com., 5/4 and 6/4		48 00
Red and White Oak, plain, No. 2 com., 5/4 and 6/4		35 00
Red and White Oak, plain, 1sts and 2nds, 8/4		70 00
Red and White Oak, plain, No. 1 com., 8/4		50 00
White Oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00	85 00
White Oak, ¼ cut, 1sts and 2nds, 4/4		89 00
White Oak, ¼ cut, 5/4 and 664, 1sts and 2nds		92 00
White Oak, ¼ cut, No. 1 com.		57 00
Hickory, 1sts and 2nds, 4/4		64 00
Hickory, 6/4, 1sts and 2nds		70 00
Hickory, 8/4, 1sts and 2nds		75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$55 00	57 00
1¼-in. and 1½-in. x 8-in. & up	70 00	72 00
2-in. x 7-in. and up	72 00	74 00
No. 2 cuts 2 x 8-in. and up	45 00	48 00
Pine good strips:		
1-in.	45 00	46 00
1¼ in. and 1½-in.	55 00	56 00
2-in.	56 00	57 00
Pine good shorts:		
1-in. x 7-in. and up	45 00	50 00
1-in. x 4-in. to 6-in.	32 00	34 00
1¼-in. and 1½-in.	53 00	55 00
2-in.	54 00	56 00
7-in. to 9-in. A sidings	30 00	32 00
Pine, No. 1 dressing sidings	42 00	45 00
Pine, No. 1 dressing strips	40 00	42 00
Pine, No. 1 dressing shorts	34 00	36 00
Pine, 1-in. x 4-in. s.c. strips		36 00
Pine, 1-in. x 5-in. s.c. strips		37 00
Pine, 1-in. x 6-in. s.c. strips		38 00
Pine, 1-in. x 7-in. s.c. strips		38 00
Pine, 1 x 8-in., s.c., 12 to 16 ft.		38 00
Pine, 1-in. x 10-in. M.R.		39 00
Pine, s.c. sidings, 1½ and 2-in.	30 00	42 00
Pine, s.c. strips 1-in.		33 00
1¼, 1½ and 2-in.	36 00	37 00
Pine, s.c. shorts, 1 x 4 to 6 in.	29 00	30 00
Pine, s.c. and bet., shorts 1 x 5		32 00
Pine, s.c. and bet., shorts, 1 x 6		33 00
Pine, s.c. shorts, 6'-11', 1"x 10"		36 00
Pine box boards:		
1"x 4" and up, 6'-11'		26 00
1"x 3", 12'-16'		26 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up		28 00
and up, 6-ft. to 11-ft.		26 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.		25 00
O. culls r & w p	18 00	20 00
Red Pine, log run:		
mill culls out, 1-in.	28 00	30 00
mill culls out, 1¼-in.	28 00	30 00
mill culls out, 1½-in.	28 00	30 00
mill culls out, 2-in.	28 00	30 00
mill culls, white pine, 1"x 7" and up	29 00	30 00
Mill run Spruce:		
1"x 4" and up, 6' 11'	24 00	25 00
1"x 4" and up, 12'-16'		30 00
1"x 9"-10" and up, 12'-16'		36 00
1¼"x 7" 8-9" and up, 12'-16'		35 00
1¼"x 10" and up, 12'-16'		36 00
1½" & 2"x12" and up, 12'-16'		40 00
Spruce, 1-in. clear (fine dressing and B)		37 00
Hemlock, 1-in. cull	18 00	20 00
Hemlock, 1-in. log run	23 00	24 00
Hemlock, 2x4, 6, 8, 10, 12/16'	26 00	28 00
Tamarac	24 00	26 00
Basswood, log run, dead culls out	30 00	40 00
Basswood, log run, mill culls out	26 00	28 00
Birch, log run	30 00	32 00
Soft Elm, common and better, 1, 1½, 2-in.	25 00	30 00
Ash, black, log run	32 00	40 00
1 x 10 No. 1 barn	40 00	45 00
1 x 10 No. 2 barn	38 00	40 00
1 x 8 and 9 No. 2 barn		38 00
Lath per M:		
No. 1 white pine, 1½-in. x 4-ft.	5 50	5 75
No. 2 white pine		5 25
Mill run white pine		5 50
Spruce, mill run 1½-in.		5 00
Red pine, mill run		4 75
Hemlock, mill run		4 00
32-in. lath		2 25
White Cedar Shingles:		
xxxx, 18-in.		5 00
Clear butt, 18-in.		4 00
18-in. xx		2 25
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal.	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	80	85
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Birch Planks		
1 to 4 in.	20 00	25 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.		$74 00
1 in., 8 in. and up wide		83 00
1¼ and 1½ in. and up wide		86 00
2 in. and up wide		88 00
Cuts and Better		
4/4 x 8 and up No. 1 and better		58 00
6/4 x 8 and up No. 1 and better		70 00
8/4 x 8 and up No. 1 and better		72 00
6/4 x 6 and up No. 2 and better		61 00
8/4 x 6 and up No. 2 and better		63 00
6/4 x 6 and up No. 3 and better		55 00
8/4 x 6 and up No. 3 and better		59 00
No. 1 Cuts		
1 in., 8 in. and up wide		50 00
1¼ in., 8 in. and up wide		59 00
1½ in., 8 in. and up wide		61 00
2 in., 8 in. and up wide		64 00
2½ and 3, 8 in. and up wide		84 00
4 in., 8 in. and up wide		90 00
No. 2 Cuts		
1 in., 6 in. and up wide		36 00
1¼ in., 6 in. and up wide		47 00
1½ in., 6 in. and up wide		48 00
2 in., 6 in. and up wide		49 00
2½, 3 and 4 in., 6-in. and up wide		68 00
No. 3 Cuts		
1 in., 6-in. and up wide		30 00
1¼ and 1½ in., 6-in. and up wide		35 00
2 in., 6-in. and up wide		36 00
2½, 3 and 4-in., 6-in. and up wide	45 00	48 00
Common and Dressing Mill Run		
1-in. x 4 in.		32 00
1-in. x 5-in.		32 00
1-in. x 6-in.		34 00
1-in. x 8-in.		34 00
1-in. x 10-in.		36 00
1-in. x 12-in.		38 00
1-in. x 13-in. and up		38 00
1¼, 1½ and 2 in.		40 00
No. 1 Barn		
1 inch	38 00	48 00
1¼, 1½ and 2-in.	45 00	51 00
2½ and 3-in.		55 00
4 inch		58 00
No. 2 Barn		
1 inch	35 00	42 00
1¼, 1½ and 2-in.	38 00	44 00
2½ and 3-in.		46 00
No. 3 Barn		
1 inch	32 00	36 00
No. 1, 1, 1¼, 1½, 2-in.		34 00
Box		
No. 1, 1, 1¼, 1½, 2-in.	29 00	31 00
No. 2, 1¼, 1½, 2-in.		26 00
Mill Culls		
Mill run culls, 1 in.		27 00
1, 1¼, 1½ and 2-in.		28 00
No. 2	24 00	26 00
Lath		
No. 1, 32-in. pine		2 00
No. 2, 48-in. pine		5 00
No. 1, 48-in. pine		5 50
No. 3, 48-in. pine		4 50
Hemlock Lath, 48-in.		4 50

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac.

Dimension. S. 1 S. and 1 E.

	6 ft.	8 ft.	10 ft.	14 & 16 ft.
2 x 4, 6, 8	16 00	19 00	22 50	23 50
2 x 10	20 00	20 50	23 50	24 50
2 x 12	20 00	21 00	25 50	25 00

Dimension in the rough or surfaced one side 50c. per M. extra.

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2 x 4, 8, 12, 14, 16	23 50
2 x 4, 10, 18, 20	25 50
2 x 6, 8 to 16	23 50
2 x 8, 8 to 16	23 50
2 x 4-6 and 8 in.; 24, 26, 28, 30, 32 ft.	31 50
2 x 10 and 2 x 12; 8-16 ft.	28 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	30 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	32 50
No. 1 Common Boards.	
4 inch	23 00
6 inch	25 50
8, 10, 12 inch	27 50
Mixed widths	26 50
Flooring.	
4 or 6 inch No. 1	37 00
4 or 6 inch No. 2	32 00
4 or 6 inch No. 3	26 00
Shiplap—Finished.	
6 inch	24 00
8, 10 and 12 inch	25 00
Siding.	
6 inch No. 1	37 00
6 inch No. 2	35 00
6 inch No. 3	27 00
Lath.	
No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed)	4 50

PINE—ROUGH TIMBER.

3 x 6 in.; 8 to 16 ft.	29 10
3 x 8 in.; 8 to 16 ft.	26 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	29 00
4 x 10 to 10 x 10, 8 x 8, 6x 12 in. up to 32 ft.	31 00

BRITISH COLUMBIA COAST FIR.

Dimension S1S and E.

2 x 4 in.; 6 and 8 ft.	22 50
2 x 4 in.; 12 and 14 ft.	23 50
2 x 4 in.; 10 and 16 ft.	24 50
2 x 4 in.; 18 and 24 ft.	25 50
2 x 4 in.; 22 and 24 ft.	26 50
2 x 4 in.; 26 to 32 ft.	28 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	25 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	27 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	28 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	30 00
2 x 14 in.; 10 to 16 ft.	30 00
2 x 14 in.; 18 and 20 ft.	32 00
2 x 14 in.; 22 and 24 ft.	33 00
2 x 14 in.; 26 to 32 ft.	35 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	26 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	27 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	28 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	29 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	31 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft.	29 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft.	30 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft.	30 50

FLOORING.

Nos. 1 and 2, 1 x 3 in., E. G.	37 00
Nos 1 and 2, 1 x 4 in., E. G.	40 00
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Nos. 1 and 2, 1 x 4 in. F. G.	30 00
Nos. 1 and 2, 1 x 6 in., F G.	35 00
No. 3, 1 x 4 in.	28 00
No. 3, 1 x 6 in.	33 00

No. 3 Edge grain $3 per M. extra.

SHIPLAP.

B. C. fir, 6 in.	23 50
B. C. fir, 8, 10, 12 in.; 8 to 16 ft.	24 50
No. 2 shiplap, 6 in.	23 50
No. 2 shiplap, 8, 10 and 12 in.	24 50

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Mixed widths (may contain 30 per cent. 4 and 6 in.)	22 00
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No. 2 mixed widths	18 00
No. 2 boards, 8 to 12 in.	19 00

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LATH.

Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's	4 50
Cedar lath, ⅜ x 1⅜ in. x 4 ft.	5 00

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Wholesale Selling Price

Uppers, 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
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Pulpwood, 246,282 cords.
Railway Ties, 5,704,459.

Ontario's woodworking industries, using 34 different kinds of wood, provide a ready market for the lumberman. Eighty-two per cent. of lumber used in Ontario's industries purchased within the Province.

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No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

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5/4 to 8/4	58 - 60	36 - 38	20 - 24
10/4 to 16/4	68 - 70	48 - 50	28 - 30

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4/4	58 - 60	38 - 40	22 - 24
5/4 to 8/4	60 - 62	40 - 42	24 - 26

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4/4	48 - 50	32 - 34	20 - 22
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No. 1 Cuts, 1¼ to 2 in.	70 00	75 00
No. 2 Cuts, 1 in.		49 00
No. 2 Cuts, 1¼ to 2 in.	60 00	65 00
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No. 1, 1 x 10		51 00
No. 1, 1 x 8		49 00
No. 2, 1 x 12		50 00
No. 2, 1 x 10		49 00
No. 2, 1 x 8		47 00
No. 3, 1 x 12		48 00
No. 3, 1 x 10		46 00
No. 3, 1 x 8		44 00
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Spruce, 12 in. dimension		38 00
Spruce, 10 in. dimension		38 00
Spruce, 9 in. dimension		37 00
Spruce, 8 in. under dimen.		36 00
10 and 12 in. random lengths, 8 ft. and up		36 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7.		28 00
3 x 4 and 4 x 4 in.	29 00	31 00
2 x 8 in.		33 00
All other random lengths, 7-in. and under, 8 ft. and up	28 00	30 00
5-inch and up merchantable boards, 8 ft. and up, p. 1s		31 00
1 x 2		27 00
1 x 3		27 00
1½-in. spruce laths		5 10
1½-in. spruce lath		4 70

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Extras		4 75
Clears		4 50
Second Clears	3 25	3 50
Clear whites		2 75
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Extra 1s (Clear whites out)	1 65	1 90
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Washington 16-in. 5 butts to 2-in. extra red cedar.		5 00

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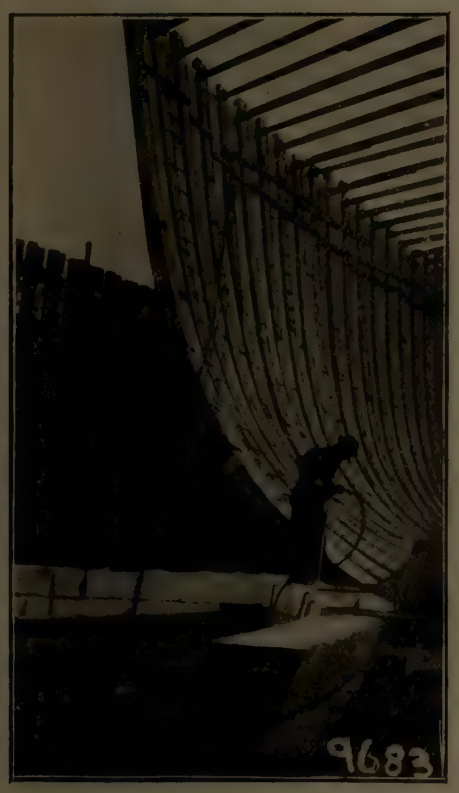

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McLaren Belting Company, J C

BLOWERS
Canadian Blower & Forge Company
Sheldons Limited
Sturtevant Company, B. F.
Toronto Blower Company

BOILERS
Hamilton Company, William
Jenckes Machine Company
Waterous Engine Works Company

BOX BANDING
Acme Steel Goods Company

BOX MACHINERY
Morgan Machine Company
Yates Machine Co., P. B.

CABLE CONVEYERS
Jeffrey Mfg. Company
Waterous Engine Works Company

CAMP SUPPLIES
Bowes Manufacturing Company.
Canadian Milk Products Limited
Davies Company, Wm.
Dr. Bell Veterinary Wonder Co.
Eckardt & Company, H. P.
Gunns Limited
Johnson A. H.
Palmer Medical Company
Smart-Woods Limited
Turner & Sons, J. J.

CANT HOOKS
Pink Company, Thomas

CEDAR
Long Lumber Company
Thurston-Flavelle Lumber Company
Vancouver Lumber Company
Victoria Lumber & Mfg. Co.

CHAINS
Canadian Link-Belt Company, Ltd.
Hamilton Company, William
Jeffrey Mfg. Company
McKay Company, James.
McKinnon Chain Company
Pink & Company, Thos.
Waterous Engine Works Company

CHINA CLAY
Bowater & Sons, W. V.

CHEMICAL PLANTS
Blair, Campbell & McLean, Ltd.

CLOTHING
Grant, Holden & Graham

COLLARS (Shaft)
Can. Bond Hanger & Coupling Co.

CONVEYOR MACHINERY
Canadian Link-Belt Company, Ltd.

COUNTERSHAFTS
Can. Bond Hanger & Coupling Co.

COUPLINGS (Shaft)
Can. Bond Hanger & Coupling Co.

CUTTER HEADS
Shimer Cutter Head Company

CYPRESS
Chicago Lumber & Coal Co.
Long Lumber Company
Wistar, Underhill & Nixon

DRY KILNS
Sheldons, Limited

DOORS
Boake Mfg. Company
Canadian Western Lumber Company
Haeberle Lumber Company
Long Lumber Company
Mason, Gordon & Company
Terry & Gordon

DOUGLAS FIR
Auger & Son
Blanchard Lumber Company
Boake Manufacturing Company.
British American Mills & Timber Co.
Canadian Western Lumber Company
Chicago Lumber & Coal Co.
Heeney, Percy E.
Knox Brothers.
Long Lumber Company
Mason, Gordon & Company
Terry & Gordon
Timberland Lumber Company
Timms, Phillips & Company
Vancouver Lumber Company
Victoria Lumber & Mfg. Co.

DRYERS
Philadelphia Textile Mach. Co.

DUST COLLECTORS
Canadian Blower & Forge Company
Sheldons Limited
Toronto Blower Company

ELEVATING AND CONVEYING MACHINERY
Canadian Link-Belt Company, Ltd.
Jeffrey Manufacturing Company
Waterous Engine Works Company

EMERY GRINDERS
Canadian B. K. Morton Company.
Carborundum Company
Waterous Engine Works Company

ENGINES
Canadian Blower & Forge Company
Hamilton Company, William
Jenckes Machine Company
Waterous Engine Works Company

EXCELSIOR MACHINERY
Fisher & Davis Mfg. Co.

EXHAUST FANS
Canadian Blower & Forge Company
Sheldons Limited
Toronto Blower Company

EXHAUST SYSTEMS
Canadian Blower & Forge Company
Sheldons Limited
Toronto Blower Company

FILES
Canadian B. K. Morton Company
Disston & Sons, Henry
Nicholson File Company
Simonds Canada Saw Company

FIRE BRICK
Elk Fire Brick Company of Canada
Waterous Engine Works Co.

FIRE FIGHTING APPARATUS
Waterous Engine Works Company

FOREST ENGINEERS
Coolidge, Philip T.
Lauderburn, D. E.

GLOVES
Eisendrath Glove Company

GRAVITY LUMBER CARRIER
Can. Mathews Gravity Carrier Co.

GRINDERS (Bench)
Can. Bond Hanger & Coupling Co.

HARNESS
Lamontagne Limited

HARDWOODS
Anderson Lumber Company, C. G.
Bartram & Ball.
Bathurst Lumber Company
Boake Manufacturing Company.
Cameron & Company
Chicago Lumber & Coal Co.
Fassett Lumber Company
Fraser Limited
Gillespie, James
Heeney, Percy E.
Knox Brothers.
Long Lumber Company
McLennan Lumber Company
Milne, Hall & Johns.
Moores, Jr., E. J.
Nicholson & Co., E. M.
Spencer, C. A.
Stearns Salt & Lumber Company
St. Mary's Wood Specialty Company.
Summers, James R.
Webster & Bro., James

HARDWOOD FLOORING
Long Lumber Company

HANGERS (Shaft)
Can. Bond Hanger & Coupling Co.

HEMLOCK
Anderson Lumber Company, C. G.
Bartram & Ball.
Blanchard Lumber Company
Boake Manufacturing Company.
Bourgouin, H.
Graves, Bigwood & Company
Haeberle Lumber Company
Hart & McDonagh
Laferte, J. A.
Long Lumber Company
McGibbon Lumber Company
Mason, Gordon & Company
Spencer, C. A.
Terry & Gordon
The Long Lumber Company

HOSE
Dunlop Tire & Rubber Co.
Gutta Percha & Rubber Company

INTERIOR FINISH
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Boake Manufacturing Company.
Canadian Western Lumber Company
Chicago Lumber & Coal Co.
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Mason, Gordon & Company
Southern Lumber Company
Stout Lumber Company
Terry & Gordon

KNIVES
Disston & Sons, Henry
Peter Hay Knife Company
Simonds Canada Saw Company
Waterous Engine Works Company

LATH
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Austin & Nicholsin
Chicago Lumber & Coal Co.
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Fraser Limited
Fraser-Bryson Lumber Company
Freeman-Smith Lumber Company.
Fordyce Lumber Company
Gates Lumber Company
Graves, Bigwood & Company
Harris Tie & Timber Company
Long Lumber Company
McGibbon Lumber Company
McLennan Lumber Company
New Ontario Colonization Company
River Ouelle Pulp & Paper Co.
Shier Lumber Company, J. D.
Southern Lumber Company
Stone, Fred J.
Stout Lumber Company
Spencer, C. A.
Union Lumber Company
Victoria Harbor Lumber Company
Wisconsin & Arkansas Lumber Co.

LATH TWINE
Consumers Cordage Company

LOCOMOTIVES
Climax Manufacturing Company
Jeffrey Manufacturing Company
Montreal Locomotive Works

(Continued on page 58)

EST. 1880 "FACTS FIRST"

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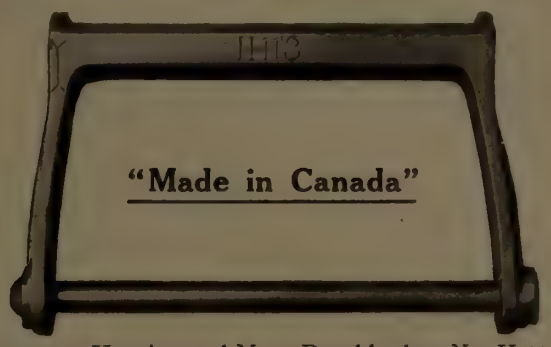
FOR EVERY SERVICE

H-113 Riveted Malleable Iron Link-Belt for Sawdust or Refuse

is an improved No. H-110. May be substituted for No. H-110 without any change in trough or wheels



"Made in Canada"

Stronger, Heavier, and More Durable than No. H-110.

This is the >——< Mark of Quality

It appears on every Link-Belt manufactured by us, and is your guarantee of reliability in material, workmanship, inspection and service.

Write for Folder No. 266.

CANADIAN LINK-BELT CO., LTD.

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Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.

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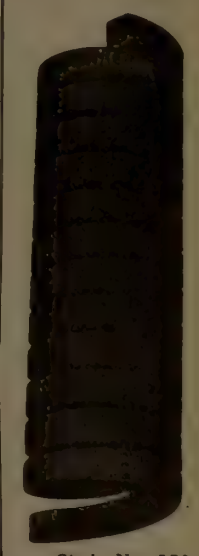

Style No. 150

The Garlock Packing Co.

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LOCOMOTIVE CRANES
Canadian Link-Belt Company, Ltd.

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McKay Company, James

LOGGING ENGINES
Dunbar Engine & Foundry Co.
Jenckes Machine Company

LOGGING MACHINERY AND EQUIPMENT
Hamilton Company, William
Waterous Engine Works Company

LOGGING ROPES (Steel)
Canadian B. K. Morton Co.

LUMBER DRESSING
Savoie & Company
Shier Lumber Company, J. D.

LUMBER MEASURING REGISTER
Jas. Morrison Brass Mfg. Company

LUMBER TRUCKS
Can. Pneumatic Tool Company, Ltd.
Waterous Engine Works Company

LUMBERMEN'S CLOTHING
Acme Glove Works, Limited
Smart Woods Limited

METAL REFINERS
Canadian B. K. Morton Co.
Canada Metal Company
Hoyt Metal Company
Sessenwein Bros.

MILLING IN TRANSIT
Canada Builders Limited

NORTHERN PINE
Anderson Lumber Company, C. G.
Austin & Nicholson
Bathurst Lumber Company
Bennett Lumber Company, Ltd.
Bourgouin, H.
Cleveland-Sarnia Sawmills Company
Donogh & Company, John
Eagle Lumber Company
Fraser-Bryson Lumber Company
Fraser Limited
Gillies Bros. Limited.
Gordon & Company, Geo.
Graves, Bigwood Company
Harris Tie & Timber Company
Hart & McDonagh
Hettler Lumber Co., Herman H.
Long Lumber Company
McLennan Lumber Company
Montreal Lumber Company
Moores, Jr., E. J.
Oliver Lumber Co.
Parry Sound Lumber Co.
Spencer, C. A.
Summers, James R.
Terry & Gordon
Watson & Todd, Limited

OLD IRON AND BRASS
Sessenwein Bros.

PACKING
Atlas Asbestos Company, Ltd.
Canadian B. K. Morton Company
Dunlop Tire & Rubber Co.
Garlock Packing Company
Gutta Percha & Rubber Company

PAPER
Bowater & Sons, W. V.

PAPER MILL MACHINERY
Bowater & Sons, W. V.

PILLOW BLOCKS
Can. Bond Hanger & Coupling Co.

PLANING MILL EXHAUSTERS
Sheldons Limited
Sturtevant Company, B. F.

PLANING MILL MACHINERY
Sheldons Limited
Yates Machine Co., P. B.

POSTS AND POLES
Harris Tie & Timber Company
Long Lumber Company
Mason, Gordon & Company
Terry & Gordon.

PRESSES
Perrin & Company, W. R.

PULLEYS & SHAFTING
Can. Bond Hanger & Coupling Co.
Hamilton Company, William
Waterous Engine Works Company

PULP MILL MACHINERY
Canadian Link-Belt Company, Ltd.
Hamilton Company, William
Jeffrey Manufacturing Company
Waterous Engine Works Company.

PUMPS
Darling Bros.
Hamilton Company, William
Smart-Turner Machine Company
Waterous Engine Works Company

RAILS
Gartshore, John J.
Sessenwein Bros.

ROPE
Consumers Cordage Company
Waterous Engine Works Company

RUBBER GOODS
Atlas Asbestos Co.
Gutta Percha & Rubber Company

SASH
Haeberle Lumber Company

SAWS
Atkins & Company, E. C.
Disston & Sons, Henry
Hoe & Company, R.
Shurly-Dietrich Company
Simonds Canada Saw Company
Smith Company, R. H.

SAW SHARPENERS
Mason, Gordon & Company
Rogers & Company, Samuel C.
Waterous Engine Works Company

SAW MILL MACHINERY
Canadian Allis-Chalmers Limited
Canadian Link-Belt Company, Ltd.
Dunbar Engine & Foundry Co.
Fisher & Davis Mfg. Company
Gordon Hollow Blast Grate Co.
Hamilton Company, William
Huther Bros. Saw Mfg. Company
Jeffrey Manufacturing Company.
Long Manufacturing Company, E.
Parry Sound Lumber Company
Payette Company, P.
Waterous Engine Works Company
Yates Machine Co., P. B.

SHINGLES
Bathurst Lumber Company
Blanchard Lumber Company
Campbell-MacLaurin Lumber Co.
Canadian Western Lumber Company
Fraser Limited
Gillespie, James
Harris Tie & Timber Company
Heeney, Percy E.
Long Lumber Company
Mason, Gordon & Company
McGibbon Lumber Company
McLennan Lumber Company
Shier Lumber Company, J. D.
Terry & Gordon.
Timms, Phillips & Company
Vancouver Lumber Company
Victoria Lumber & Mfg. Co.
West Coast Lumbermen's Assoc.

(Continued on page 60)

The Babbitt Metal that's at the Front in Efficiency and Economy

HARRIS HEAVY PRESSURE

"The Babbitt Metal Without a Fault," is guaranteed to give EXCELLENT SERVICE. It will not crack or squeeze out. It will run cool at any speed. It is copper coated and copper hardened. It is best for all general machinery bearings. Order a box from our nearest factory.

It is Made in Canada. What We Make We Guarantee.

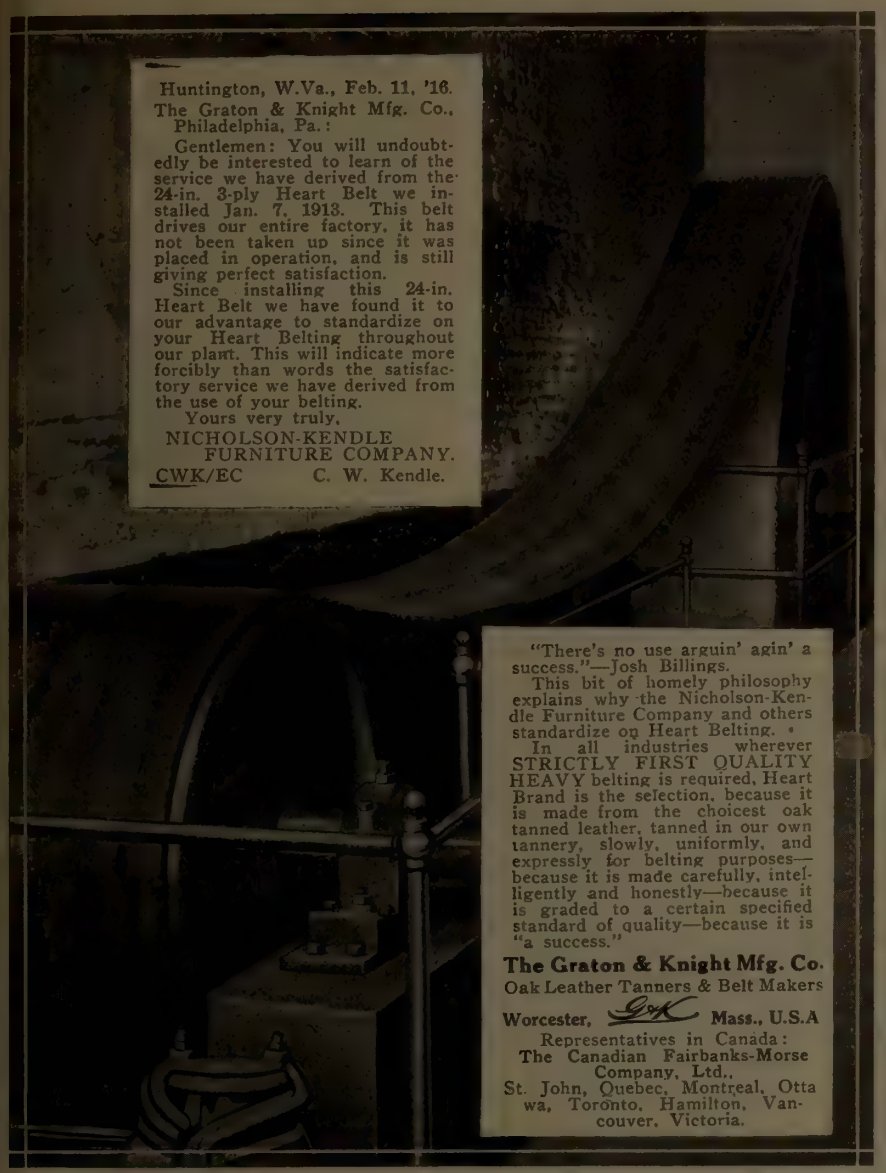
We Manufacture All Grades of Babbitt Metals.

WRITE FOR COMPLETE LIST

THE CANADA METAL COMPANY, Limited

Head Office and Factory TORONTO Fraser Avenue

Branch Factories :—HAMILTON, MONTREAL, WINNIPEG, VANCOUVER



Don't Blame the

FIRE BRICK

if it fails to give satisfaction. More likely than not you have been using the wrong kind for your particular purpose. A firebrick intended for use in a small hand-fired boiler may not give the same result if used under high pressure boiler with mechanical stoker.

So when sending us your enquiries be sure to specify for what purpose these brick are to be used.

You are sure then of a high quality brick, that is absolutely the best for your purpose.

We Manufacture the Following Well Known Brands

"Elkco Special," "Elk Steel," "St. Marys," "Keystone" and "Rotex"

Catalogue is yours for the asking.

Elk Fire Brick Co. of Canada, Limited

HIGH GRADE FIRE BRICK & CLAY

Sun Life Building, Hamilton, Canada

Representatives for Maritime Provinces:
RHODES, CURRY COMPANY, LTD., Head Office, AMHERST, N. S.
Branches at Halifax, Sydney and New Glasgow, N.S.

SHINGLE & LATH MACHINERY
Dunbar Engine & Foundry Co.
Hamilton Company, William
Long Manufacturing Company, E.
Payette Company, P.
Fisher & Davis Mfg. Co.
Waterous Engine Works Company

SHOEPACKS
Gendron Penetang Shoepack Co.
P. T. Gendron Shoepack Company

SILENT CHAIN DRIVES
Canadian Link-Belt Company, Ltd.

SLEEPING ROBES
Smart Woods Limited

SNOW PLOWS
Pink Company. Thos.

SODA PULP PLANTS
Becker & Co.

SOUTHERN PINE
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Cameron & Company
Chicago Lumber & Coal Company
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Hobart & Company
Long Lumber Company
Mason, Gordon & Company
McLennan Lumber Company
Southern Lumber Company
Stout Lumber Company
Wilson Lumber Company
Wisconsin & Arkansas Lumber Co.
Wuichet, Louis

SPARK ARRESTERS
Canada Wire & Iron Goods Co.

SPRUCE
Bartram & Ball.
Bathurst Lumber Company
Blanchard Lumber Company
Boake Manufacturing Company.
Bourgouin, H.
Brown Corporation
Donogh & Company, John
Fraser Limited
Fraser-Bryson Lumber Company
Gillies Bros.
Grant & Campbell
Hart & McDonagh
Laferte, J. A.
Long Lumber Company
Mason, Gordon & Company
McLennan Lumber Company
New Ontario Colonization Company
Nicholson & Co., E. M.
River Ouelle Pulp & Lumber Co.
Spencer, C. A.
Stone, Fred J.
Terry & Gordon.

STEEL CHAIN
Canadian Link-Belt Company, Ltd.
Columbus Chain Company
Jeffrey Mfg. Company
McKinnon Chain Company
Waterous Engine Works Co.

STEAM PLANT ACCESSORIES
Waterous Engine Works Company

STEAM APPLIANCES
Darling Bros.

STEAM TRAPS
Canadian Morehead Mfg. Company

STEEL BARRELS
Smart-Turner Machine Co.

STEEL DRUMS
Smart-Turner Machine Co.

TARPAULINS
Smart Woods Limited
Turner & Sons, J. J.

TAPS and DIES
Pratt & Whitney Company
Waterous Engine Works Company

TEA
Salada Tea Company

TENTS
Smart Woods Limited
Turner & Sons, J. J.

TIES
Austin & Nicholson
Harris Tie & Timber Company
Long Lumber Company
McLennan Lumber Company
Terry & Gordon.

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International Time Recording Co.

TIMBER BROKERS
Cant & Kemp
Farnworth & Jardine
Hillas & Company, W. N.
Smith & Tyrer Limited

TIMBER CRUISERS AND ESTIMATORS
Lauderburn, D. E.
McInnis, A. D.
Sewall, James W.

TIMBER LANDS
Dept. of Lands and Forests
Lacey Co., Jas. D.

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TOWING WINCHES
Corbet Foundry & Machine Co.

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Can. Bond Hanger & Coupling Co.
Canadian Link-Belt Company, Ltd.
Dodge Manufacturing Company
Jeffrey Manufacturing Company
Waterous Engine Works Company

TRANSMISSION ROPE
Consumers Cordage Company

TRIMMERS
Gordon Hollow Blast Grate Co.

TUGS
West & Peachey

TURBINES
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Smith Company, S. Morgan.

VENEERS
Canadian Western Lumber Company
Webster & Bro., James

VENEER DRYERS
Philadelphia Textile Mach. Co.

VENEER MACHINERY
Perrin, William R.
Philadelphia Textile Machinery Co.

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Douglas & Company
Dr. Bell Veterinary Wonder Co.
Palmer Medical Company

WATER WHEELS
Hamilton Company, William
Smith Company, S. Morgan

WIRE CLOTH
Canada Wire & Iron Goods Co.

WOOD DISTILLATION PLANTS
Blair, Campbell & McLean, Ltd.

WOODWORKING MACHINERY
Canadian Blower & Forge Company
Jeffrey Manufacturing Company.
Long Manufacturing Company, E.
Machinery Company of America
Waterous Engine Works Company
Yates Machine Co., P. B.

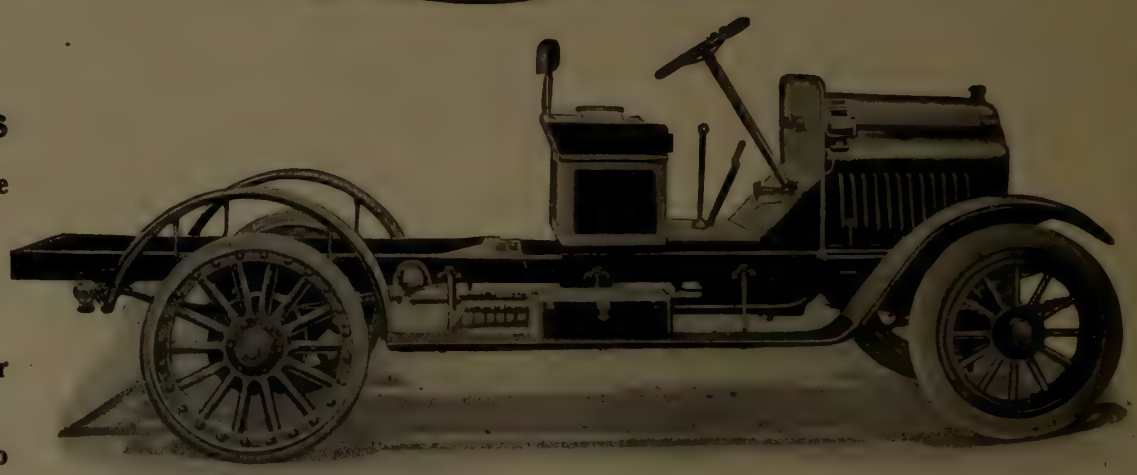
WOOD PULP
Austin & Nicholson
Becker & Co.
New Ontario Colonization Co.
River Ouelle Pulp & Lumber Co.

YELLOW PINE
Blanchard Lumber Company
Boake Manufacturing Company.
Crescent Lumber Company.

The "Little Giant" Truck

Special Features

Timken Worm Drive
Continental Motor
Schebler Carburetor
Ross Irreversible Steering Gear
Eisemann High Tension Magneto



Standard Models

"H 4"—1½ tons Chain Drive
"15"—1 ton Worm Drive
"16"—2 tons Worm Drive
"17"—3½ tons Worm Drive
"18"—5 tons Worm or Chain Drive to order

Model 15—1 Ton

THE LITTLE GIANT MOTOR TRUCK enables the retail lumber dealer to give his customers the very best of service, which is the big outstanding argument that interests the busy contractor. Other things being equal, the lumber dealer who can give the best service gets the most business.

The DUNTLEY Hydro-Pneumatic Gas Generator

THE DUNTLEY Hydro-Pneumatic Gas Generator is an exclusive feature of Little Giant Motor Trucks. With this device the Little Giant Truck may be operated on a mixture of one-half kerosene and one-half gasoline, at a saving in fuel cost of over 50 per cent., with a total absence of carbon, smoke or odor.

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Government Contractors and the largest Manufacturers and Dealers in Canada of

Lumbermen's Tents, Bed Ticks, Grey Blankets, Nose Bags, Waterproof Goods, Steel Ranges and General Camp Outfits.

Write for Catalogue. **Prompt shipments.**

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. **Get Catalog "H."**

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

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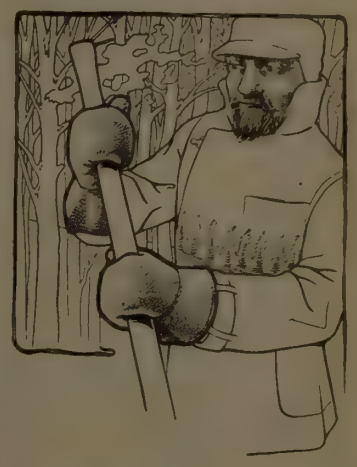
"ASBESTOL" Gloves and Mittens have built up a country-wide reputation for all round *service, comfort* and *wearing qualities.* It is to your immediate advantage to familiarize yourself with "ASBESTOL"

We don't claim that "ASBESTOL" will wear "forever," but they will really surprise you by the wear resisting powers that they possess.



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REG. IN U.S. PAT. OFF.

EISENDRATH'S CELEBRATED HORSE HIDE

Gloves and Mittens

Look for the diamond shaped trade mark when buying gloves or mittens.

DEALERS: Your nearest jobber has "ASBESTOL" and can supply you on short notice.

EISENDRATH GLOVE COMPANY
2001 Elston Ave. - - CHICAGO

LOGGING LOCOMOTIVES

Locomotives on trunk line railroads have the advantage of the best facilities for inspection and repairs.

Logging locomotives face different conditions. They must work day after day in the hardest service, and often in localities where repairs cannot be made without great inconvenience. That is why we build our logging locomotives from interchangeable stock parts. With this system every part must fit every other locomotive of the same size and design, and long delays waiting for duplicate parts are avoided. Interchangeable parts kept on hand at our Works for prompt shipment

MONTREAL LOCOMOTIVE WORKS, LIMITED,

DOMINION EXPRESS BUILDING, MONTREAL, CANADA.

NO. 40 HEAVY DUTY STEEL SAW CARRIAGE

Long's "Quality" Carriages were the first saw mill machines built by the Company. They were the machines that earned the reputation for dependability in service, that has placed "Long" Machinery in its present enviable position, at the head of its class. There is a "Long" carriage, in a weight, and at a price, to suit every purchaser. Catalogue on application.

The carriage illustrated is our heavy duty 3 block No. 40, the knees of which recede 40" from saw line. The carriage can be furnished in any number of head blocks or axles.

This mark on your saw mill machinery is an indication that your lumber manufacturing equipment is the best and most economical money can buy.

The E. Long Mfg. Co. Ltd., Orillia

An Edger for 6" Cants

You can put a 6-in. cant through this edger and know that it will come through edged to a hair. Edger carries 22-in. saws, 6-in. saw collars, leaving 7-in. clear saw blade, more than enough margin for 6-in. stock

Mandrel is 3⅞-in. in diameter, the three bearings that support it are each almost 10-in. long—the rest of the machine is built in proportion. That's why Waterous New Champion Edgers can be crowded to the limit and will turn out full capacity, day after day, without straining.

Notice the feed rolls, two before and two behind the saws. They are machine fluted to give a firm, secure grip on the timber that holds it fast, but will not mar it in any way.

We build up-to-date Machinery for Sawmills of every capacity—circular or band

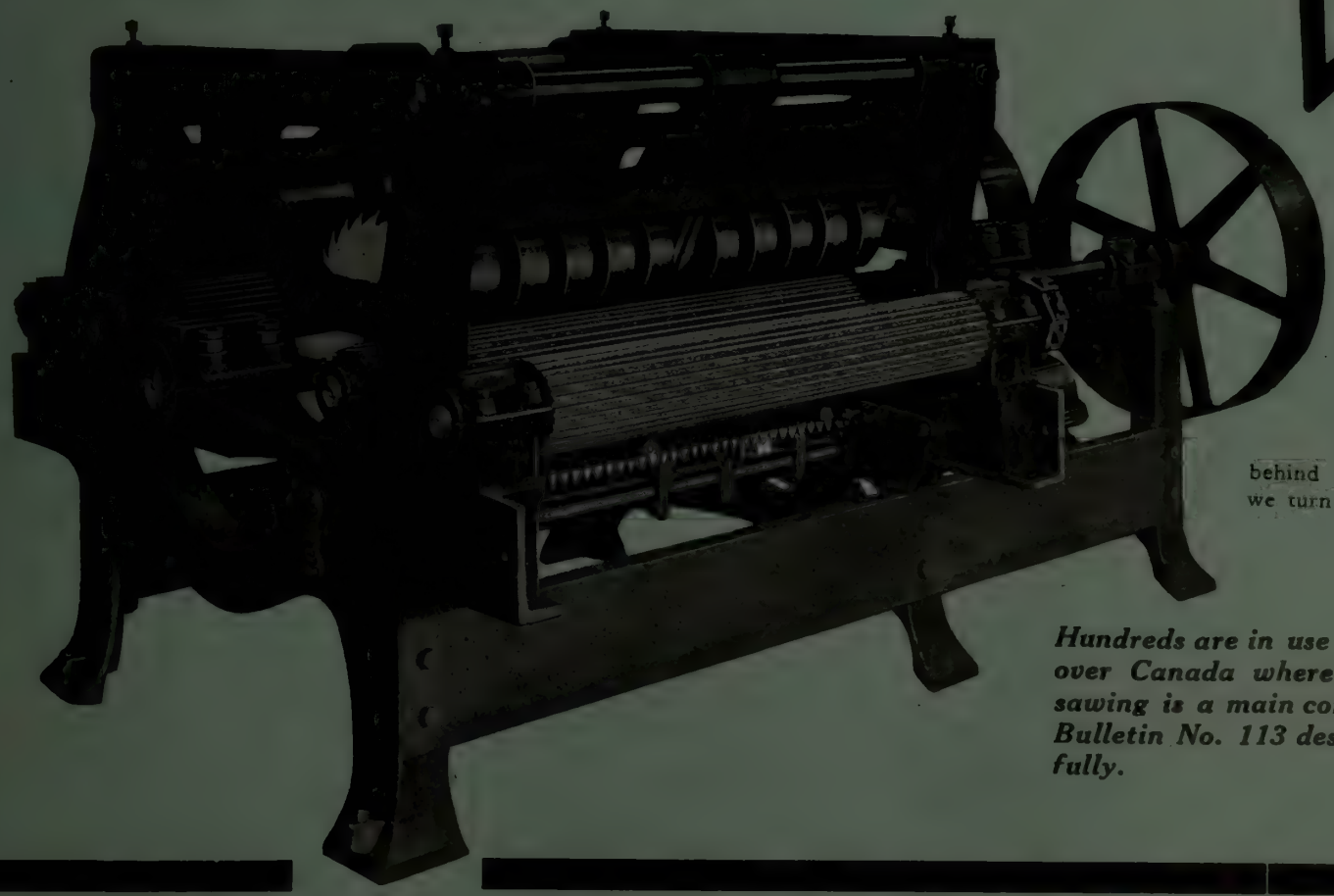
Catalogues on request

The press rolls are divided, too, making both sides of the machine independent of each other. It's a worth while feature, decidedly.

WATEROUS NEW CHAMPION EDGERS

are built with 40", 48", 56", 60" and 72" opening. They carry as many as four movable and two stationary saws without difficulty.

These edgers cut true and to dimension at all times. The guides are rigid and cannot shift in the cut. They are crowded to correct position and held immovably in place by a steel setting gauge that drops upon them. *No other edger has this feature.*



Waterous New Champion Edgers are fast and accurate cutting, easily operated, and perfectly safe. We stand behind every machine we turn out.

Hundreds are in use in mills all over Canada where quality of sawing is a main consideration. Bulletin No. 113 describes them fully.

The Waterous Engine Works Co., Ltd., Brantford, Canada

"FROST KING" METAL

$5,000,000.00
worth of mixed metal sold annually.

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. Price 30c per lb., Fort William and East; West of Fort William 35c per lb., delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our TROJAN BABBITT will stand where all other metals will fail. Price, Fort William and East, 40c per lb.; West of Fort William, 45c, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

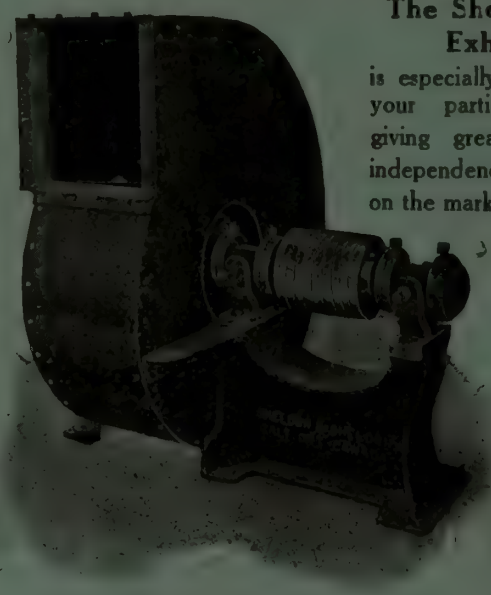
HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Planing Mill Improvements

Every Manufacturer in the Lumber Industry realizes that to be "up-to-date" their Factory should be installed with **Shaving Exhaust Fans.**



The Sheldon Shaving Exhaust Fan
is especially designed to suit your particular requirements giving greater efficiency and independence than any other on the market.

See our New Catalogue

Sheldons Limited - Galt, Ontario

Toronto Office, 609 Kent Building

AGENTS:

Messrs. Ross & Greig, 412 St. James St. Montreal, Que. Messrs. Walker's Limited, 259-261 Stanley St. Winnipeg, Man.

Messrs. Gorman, Clancey & Grindley, Ltd., Calgary and Edmonton, Alta.

Messrs. Robt. Hamilton & Co. Ltd., Bank of Ottawa Bldg., Vancouver, B.C.

Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.
Limited

General Mill Supplies MONTREAL

Pink's Lumbering Tools

The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
We manufacture all kinds of lumber tools. Light and Durable.

Long Distance Phone, No. 87

Send for Catalogue and Price List.

Sold throughout the Dominion by all Wholesale and Retail Hardware Merchants.

It's a Pink anyway you take it, and it's the best Peavey made

The Thomas Pink Company, Limited

Manufacturers of Lumber Tools

PEMBROKE - - - - - ONTARIO

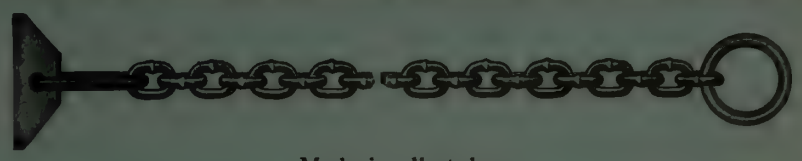
Vol. 37 Toronto, September 1, 1917 No. 17

Canada Lumberman & Wood Worker

New **RAILS** Relaying
12 to 80 pounds per yard.

LOGGING CARS

Jno. J. Gartshore
58 Front St. West, Toronto



Made in all styles

Electric-Welded Boom Chain

We also specialize
Log Chains and "Dreadnaught" Loading Chain
Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.

Shimer Circular Bit Jointing Heads

A circular shear cut head that is unsurpassed as a Jointing Head for stock from 1″ to 3″; always ready for the job without a set up, saving you money, and assuring a perfect square joint. Made in four, six or eight bits with or without Self Centreing Colet.

Write for Prices

SHIMER CUTTER HEAD CO. OF CANADA, LTD., GALT, ONTARIO
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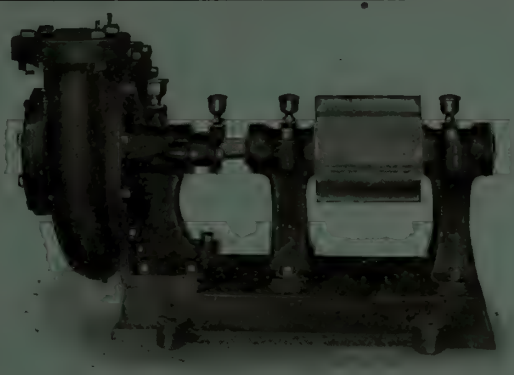
ASBESTOS

We manufacture practically every article that can be made of Asbestos—including

Asbestos { Packings, Boiler Gaskets, Pipe and Boiler Coverings

Atlas Asbestos Co., Limited, Montreal
(Formerly Turner Bros. Canada Limited)



PUMPS

Vertical
Horizontal

Steam
Power

The Smart-Turner Machine Co., Ltd., HAMILTON CANADA

BUY EMPIRE GOODS WHEN EFFICIENCY IS GUARANTEED.

J. M. T. Reducing Valves

PATENTED

We offer the one successful valve that will positively reduce the steam pressure from boiler to required power and keep the lower pressure even, continuously. In constructing this latest type reducing valve we have gone over every previous good idea along this line, and our present type has proven absolutely reliable under all conditions. We sell the J. M. T. Reducing Valve under a positive guarantee. Send for illustrated folder, giving method of operation, prices, installations, etc., of this valve.

The James Morrison Brass Mfg. Co., Limited
93-97 Adelaide Street West, TORONTO

MADE IN CANADA.

Alphabetical Index to Advertisers, Page 54 Classified Directory to Advertisements, Page 60

The "Feel" of a Good File

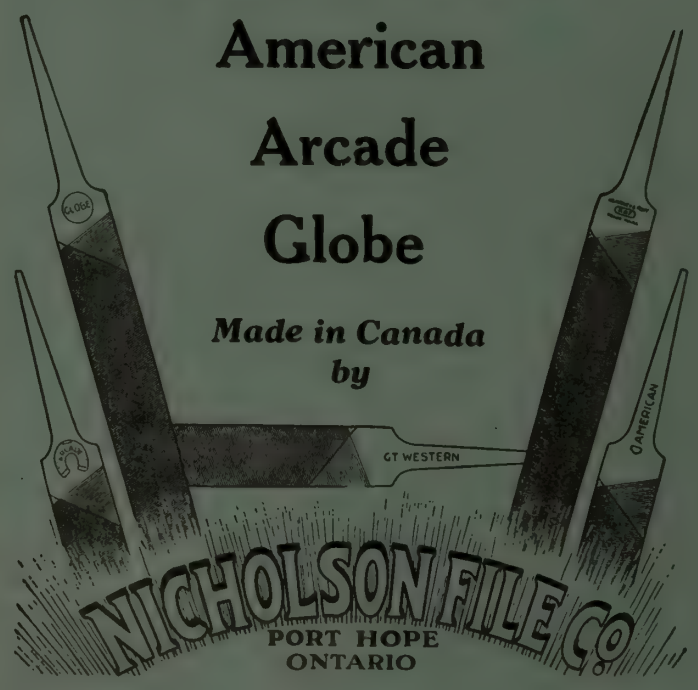
Did you ever watch a really capable mechanic test a file? He has a way of passing a sensitive thumb over its teeth. Instinctively, unfailingly, he thereby determines whether it is fit for use.

This man always chooses **Famous Five.** He never buys blindly. He can "feel" that a **Famous Five** is right. He can "feel" its sharp, keen-cutting teeth, arranged in rows of perfect uniformity. There is no doubt in his mind. He buys **Famous Five.** He makes sure of satisfaction.

Our catalog and copy of "File Filosophy" will interest you. Write for them to-day.

Kearney & Foot
Great Western
American
Arcade
Globe

Made in Canada by



FOR SALE

Standing Timber

in Large or Small Blocks

and

Sawmill Machinery

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Falconbridge and Street for small mills.

We have the following Sawmill Machinery For Sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.
1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.
1 Double cylinder steam nigger, right hand.
1 Log Loader for right hand mill.
1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.
1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.
1 left-hand steam nigger.
1 Log-loader.
1 Endless chain jack ladder with two kickers complete for right and left hand mills.
2 Roger Gang Edgers for 8-in. cants and lumber.
1 Waterous double edger, 6 saws.
1 2-saw Trimmer.
1 20-ft. Slash Table.
1 16-ft. Revolving Slash Table
1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.
1 Lath Mill with bolter.
2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.
1 Hand Machine for cut-off saws.

POWER PLANT

1 Double Duplex, high pressure Water Pump.
5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.
2 125 h.p. Water Wheels.
1 Upright Engine for sawdust conveyor.
1 10 h.p. Engine.
1 Wood Machine for 22-in. wood.
1 Edger for ripping dry lumber, installed.
1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co.

Limited

26 Ernest Ave.

Toronto, Canada

SPRUCE

1916 SAWING—DRY STOCK

Merchantable		5th Quality	
2 x 4 x 10/16 -	50,000'	3 x 5 and up x 6/16' -	160,000'
2 x 5 and 6 x 10/16	60,000'		
2 x 7 x 10/16 -	100,000'		

1917 SAWING

Merchantable

1 x 3 x 10/16	2 x 4 x 8/16	3 x 6 x 10/16
1 x 4 "	2 x 5 "	3 x 7 "
1 x 5 "	2 x 6 "	3 x 8 "
1 x 6 "	2 x 7 "	3 x 9 "
1 x 7 and up	2 x 8 "	3 x 10 "
	2 x 9 and up	3 x 11 "

Mill Culls

1 x 3 and up x 6/16	2 x 4 and up x 6/16	3 x 6 and up x 6/16

Merchantable Spruce Lath 1½ x 4'

Bartram & Ball Limited

WHOLESALE LUMBER

Drummond Bldg. - Montreal, Que.

B.C. Fir Lumber and Timbers

Rough or Dressed

On account of the uncertainty of car and mill supply, we are offering only material that is in transit. We then know that we can deliver these cars when promised.

Wire us your enquiries.

Cars Now in Transit:

Flooring
Ceiling
Rough Clear Fir, Kiln Dried
Ship-Decking
Timbers
Shingles
Tank Stock
Ship Timbers and Planking

KNOX BROTHERS, Drummond Building, 511 St. Catherine St., Montreal, Que.

VANCOUVER OFFICE: PACIFIC BLDG., VANCOUVER, B.C.

SPECIALISTS IN BRITISH COLUMBIA FOREST PRODUCTS

Sole representatives of The Victoria Lumber & Manufacturing Company, Ltd., in Eastern Ontario, Quebec and Maritime Provinces.

HAVE YOU TRIED
CHEMAINUS TIMBERS

Victoria Lumber & Mfg. Co., Ltd.

Head Office and Mill

CHEMAINUS, B. C.

Sales Office for Eastern Canada

Traders Bank Bldg.,

TORONTO - ONT.

R. G. CHESBRO, Rep.

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

Bone Dry Birch

1916 Cut

Longford Stock

15,000 ft. 4/4 No. 2 Com. Birch
24,000 ft. 4/4 No. 1 Com. and Better Birch
15,000 ft. 5/4 No. 1 Com. and Better Birch
1,100 ft. 6/4 No. 2 Com. Birch

Burks' Falls

1 Car 1 x 10—10 to 16 Mill Run Hemlock

Arnprior

50,000 ft. 1 x 4—12 to 16 Mill Run White Pine
30,000 ft. 1 x 5—12 to 16 Mill Run White Pine
50,000 ft. 1 x 6—12 to 16 Mill Run White Pine
50,000 ft. 1 x 12—12 to 16 No. 1 White Pine Culls
50,000 ft. 1 x 8 and up—12 to 16 No. 1 White Pine Culls
100,000 ft. 1 x 12—12 to 16 No. 2 White Pine Culls

2 Cars 3X B.C. Cedar Shingles in transit to Sarnia for orders.
2 Cars to Cartier for orders.

The Long Lumber Company

Hamilton, Ont.

Rubber Goods
FOR LUMBERMEN

Belting Our long experience in the making of Rubber Belts enables us to specialize on this line. "P.M.S.," "Special Drive" and "Lion" are our leading brands for power transmission.

Packings "Redstone" High Pressure Sheet Packing has proved by test that it will outlast any other similar packing on the market. We make Spiral and Ring Packings, etc., that are equally reliable.

Hose for Steam, Water, etc., in various grades, made especially to give satisfactory and economical service under different conditions.

Fire Hose One or more of our twenty brands of Fire Hose will be found, not only in the best equipped Factories, Mills, etc., but in almost every Fire Department in the Dominion.

Gutta Percha & Rubber, Limited

TORONTO MONTREAL WINNIPEG REGINA SASKATOON CALGARY EDMONTON VANCOUVER

George Gordon & Co.

Limited

Cache Bay - Ont.

Manufacturers of

RED and WHITE PINE

PLANING MILL **DRY KILN**

A Cheaper, Quicker and Better way for Handling Lumber, Dimension Stuff, etc.

As a first step, write for our literature on Handling Lumber

Canadian Mathews Gravity Carrier Company, Limited

484 Richmond Street, West, TORONTO

F. N. Waldie, President. R. S. Waldie, Vice-President. W. E. Harper, Secretary.

The Victoria Harbor Lumber Co., Ltd.

Manufacturers of

Lumber, Lath and Shingles

Mills at Victoria Harbor, Ont.

HEAD OFFICE.
12-14 Wellington Street East, TORONTO, ONT.

Fraser Bryson Lumber Co., Ltd.

Office, Castle Building 53 Queen St. Ottawa, Can.

Wholesale Lumber Dealers and Selling Agents for

Fraser & Co.

Mills at

DESCHENES - - - QUEBEC

White Pine
Red Pine
Spruce
Lumber and Lath

Austin & Nicholson

CHAPLEAU, ONTARIO

Lumbermen and General Contractors

Railway Ties and Pulpwood

PILING

Rough and Dressed Lumber and Lath

MILLS AT NICHOLSON, ONTARIO

Long Leaf Yellow Pine, Louisiana Red Cypress

Annual Capacity 350,000,000 Feet Yellow Pine
50,000,000 Feet Red Cypress

Nature's best in forest products

LET US QUOTE YOU PRICES

Up-to-date mills and unsurpassed **SERVICE.**

We are ***prepared*** to fill orders—try us.

CHICAGO LUMBER & COAL COMPANY

Manufacturers

General Offices: EAST ST. LOUIS, ILLS.

I HAVE IT

All Grades in White Pine
Lath A Specialty

Milling in Connection

E. J. MOORES, Jr.

MIDLAND CANADA

LET'S GET TOGETHER

Watson & Todd Limited
OTTAWA

SPECIAL—
100/125 M. Ft. Dry Norway Culls
3 x 4″/up 6/22 ft.

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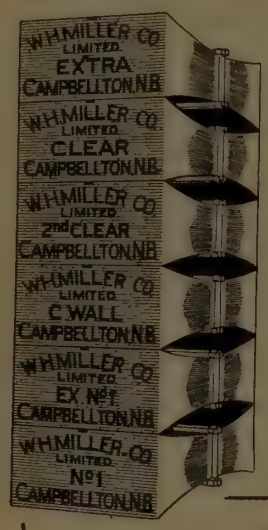
The
Harris Tie & Timber Co.
Ottawa - Canada

Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

Let us quote on your requirements for
Spruce and Pine Lumber



We manufacture and export all kinds of it.

WE ALSO MANUFACTURE
LATHS and TIES
PULPWOOD
Shipments by rail and water
Prompt--reliable--carefully handled

We Specialize in
New Brunswick White Cedar Shingles
LET US QUOTE YOU

W. H. Miller Co., Limited
Campbellton, N.B.

TIMBERS

The illustration shows a corner of our yard full of heavy Douglas Fir and Yellow Pine timbers. Note our heavy crane for the prompt handling of the big timbers.

Prices on application.

The Boake Mfg. Co. Limited
TORONTO, ONT.

Crescent Lumber Company
Cincinnati, Ohio

YELLOW PINE

— *SPECIALTIES* —

TIMBER - DIMENSION - FINISH

Inquiries Solicited

EXCELSIOR LUMBER CO.
33 RICHMOND ST. WEST, TORONTO
Lumber and Other Forest Products
Offer Dry Stock

80,000 ft. 1 x 4	—10/16	Red and Jack Pine, M.R.				
70,000 " 1 x 5	"	"	"	"	"	
63,000 " 1 x 6	"	"	"	"	"	
42,000 " 1 x 7	"	"	"	"	"	
48,000 " 1 x 8	"	"	"	"	"	
15,000 " 1 x 9 & 10	"	"	"	"	"	
6,000 " 1 x 12	"	"	"	"	"	
25,000 " 2 x 10	"	"	"	"	"	
31,000 " 2 x 8	"	"	"	"	"	
100,000 " 2 x 6	"	"	"	"	"	

CAN BE DRESSED AT MILL

RIGHT GRADES
QUICK SHIPMENTS

Canadian Western Lumber Co.

FRASER MILLS, B.C.

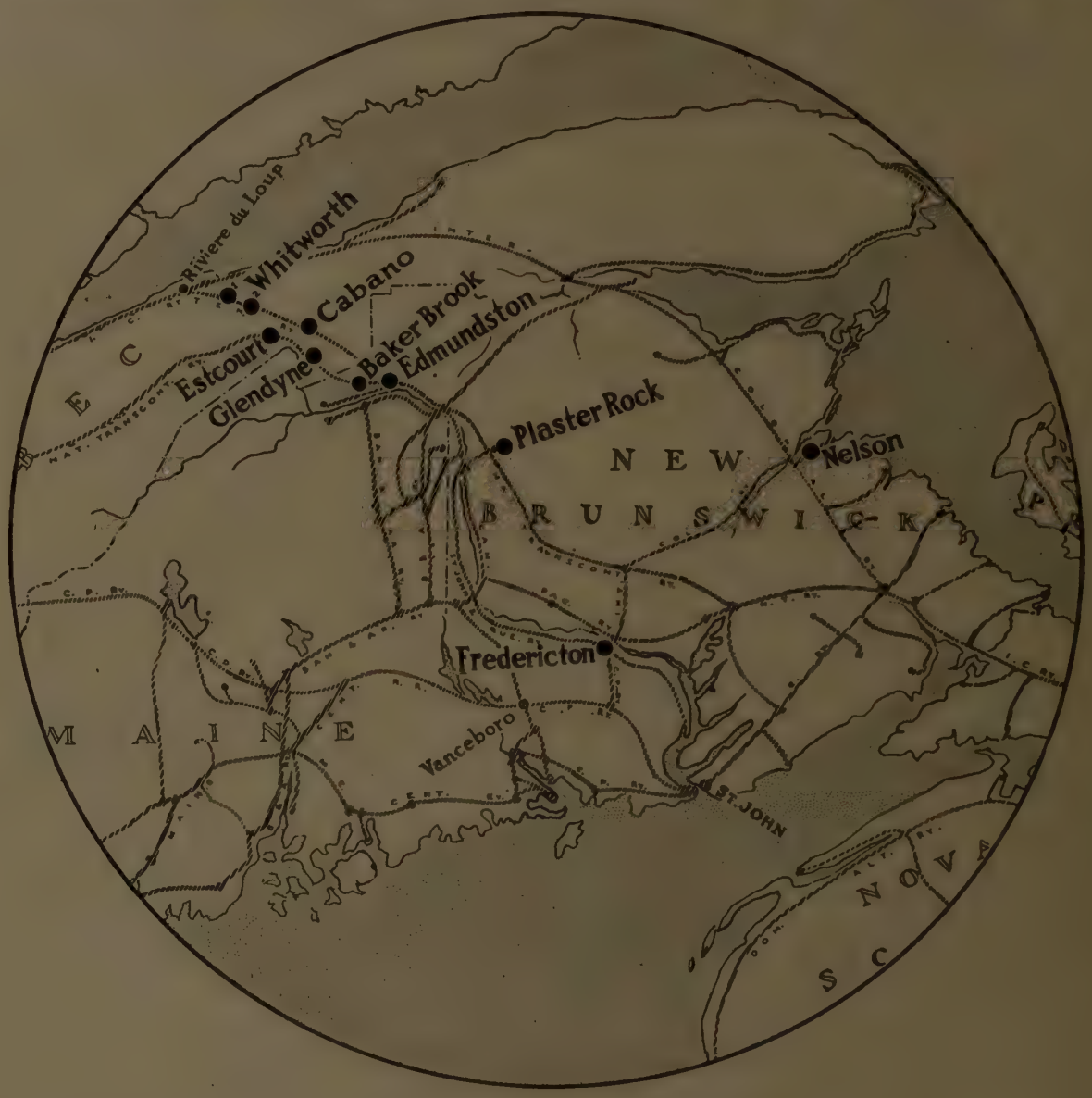
***Eastern Sales Office*—Toronto—L. D. Barclay, P. J. McCormack**

ALBERTA
A. Montgomery

SASKATCHEWAN
E. M. Simonson

MANITOBA
Winnipeg—H. W. Dickey

Ten Band Mills to Serve You



Mills and Railway Connections

Fredericton, N.B.	Railway	connection	C. P. R.
Plaster Rock, N.B.	"	"	C. P. R.
Nelson, N.B.	"	"	I. C. R.
Edmundston, N.B.	"	"	C. P. R. or Temiscouata Ry.
Baker Brook, N.B.	"	"	Temiscouata Ry. and N.T.R.
Glendyne, Que.	"	"	N. T. R.
Escourt, Que.	"	"	N. T. R.
Cabano, Que.	"	"	Temiscouata Ry.
Whitworth, Que. (No. 1, No. 2)	"	"	Temiscouata Ry.

Fraser Limited, Fredericton, N. B.

ROUGH AND DRESSED SPRUCE, WHITE CEDAR SHINGLES, SPRUCE LATH, PIANO SOUNDING BOARD STOCK.

BATHURST

LUMBER

Dry Spruce and Pine, Rough or Dressed

LATH

Spruce—Fifty Pieces per Bundle

FOR RAIL SHIPMENT

SHINGLES

"BEAVER BRAND" Cedar—Full Count

Monthly Stock and Price List on Request

Bathurst Lumber Co., Limited, BATHURST, N.B.

JOHN McKERGOW, President
W. K. GRAFFTEY, Managing-Director

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Ottawa Office: 46 Elgin St.
Montreal Office: 759 Notre Dame St., W

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Manufacturers of

SPRUCE, HEMLOCK TIMBERS AND PILING AND LATH

Prices promptly given on all enquiries.

New Glasgow, N. S.

FOR SALE

30,000 ft. 1 x 4 and up No. 2 Spruce, D1S.
60,000 ft. 5/8 x 4 and up Crating Spruce
50,000 ft. 1 x 3 and up Crating Spruce
50,000 ft. 1 x 3 Crating Spruce
200,000 ft. 1 x 4 No. 2 Jack Pine.
500,000 ft. 1 x 5 and up No. 2 Jack Pine.
800,000 ft. 1 x 4 and up No. 2 Jack Pine
100,000 ft. 1 x 12 No. 1 Mill Cull White Pine.

Also Hemlock and Pine.

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Wholesale Lumber Merchant,
95 King St. East TORONTO

Lath Wanted

We are Buyers of
ALL GRADES
WHITE PINE, SPRUCE and HEMLOCK LATH
Will contract for entire output and pay spot cash
Send full particulars as to grade, quantity and prices

FRED. J. STONE
DETROIT - - MICH
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Sawed Hemlock
Red Cedar Shingles
White Pine Lath
Bass and Poplar Siding

James Gillespie

Pine and Hardwood

Lumber

Lath and Shingles

North Tonawanda, N.Y.

LUMBER

When in the market for

White or Red Pine

or for

Ontario Hardwoods

Let Us Quote You

We have a full line of White Pine and Spruce.

We are ready to contract for Output of mills in any Ontario Soft or Hardwoods.

Highest cash prices paid, and would advance money for operations.

C. G. Anderson Lumber Company, Limited

Manufacturers and Strictly Wholesale Dealers in Lumber

705 Excelsior Life Building
Toronto

Hickory Handles

Made from the best imported
HICKORY
Quality, Shape and Finish Unexcelled
Write for latest prices and get in on the ground floor.

St. Mary's Wood Specialty Co., Limited
St. Mary's - Ont.

HAEBERLE LUMBER CO.
LUMBER AND TIMBER
White Pine, Norway, Yellow Pine, Hemlock
Oak Mouldings, Doors, Sashes and Blinds, Cedar Poles and Ties.
Yellow Pine Timber a Specialty.
Interior Trim Mill Work
NIAGARA FALLS, N.Y.

WHOLESALE DEALERS

Eastern and Southern Lumber

We are at all times in the market for dry
WHITE PINE DIMENSION SPRUCE
SPRUCE BOARDS, HEMLOCK BOARDS,
LATH and CLAPBOARDS.
Advise us of your Market Prices and Stocks

A. H. Richardson Lumber Co.
176 Federal Street, BOSTON, MASS.

Tea that is all genuine leaf and produces the greatest quantity of flavoury satisfying infusion

"SALADA"

Send for samples and prices.
SALADA TEA CO. TORONTO

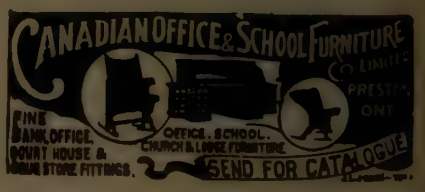
DR. BELL'S
Veterinary Wonder Remedies

10,000 one dollar ($1.00) bottles Free to horsemen who give the Wonder a fair trial. Guaranteed for Colic, Inflammation of the Lungs, Bowels, Kidneys, Fevers, Distemper, etc. Send 25c for Mailing Package, etc. Agents wanted. Write your address plainly. DR. BELL, V.S., Kingston, Ont.

BUNDLING WIRE
For Hardwood Flooring

Tie it with wire. The contractors like it because the bundles never break in handling. Write for quotations.

LAIDLAW BALE-TIE CO., Ltd.
HAMILTON, ONT.



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CANADA LUMBERMAN
347 Adelaide St. W. TORONTO

Send for advertising rates

Timber Resources

Back of the mill is the timber. A mistaken estimate may mean disaster. Employ experienced men who know. We have the largest timber cruising business east of Chicago. Write for density plan.

JAMES W. SEWALL
OLD TOWN, MAINE

PRESSES

Hydraulic and Screw
for
VENEER
VENEER DRYERS
PULP
Special machinery made to order

WILLIAM R. PERRIN
TORONTO, CANADA Limited

TIMBER ESTIMATES

Appraisal of timber lands, timber maps, logging efficiency reports, planting. Maximum of accuracy in minimum time and at minimum expense.

D. E. LAUDERBURN, Forest Engineer
Rm. 1233, 156 Fifth Ave., New York, N. Y.

Cant & Kemp

52 St. Enoch Square
GLASGOW

Timber Brokers

Cable Address, "Tectona," Glasgow
A1 and A B C Codes used

FARNWORTH & JARDINE

Cable Address: Farnworth, Liverpool
WOOD BROKERS and MEASURERS

2 Dale Street, Liverpool, and Seaforth Road, Seaforth, Liverpool, England

WE ARE BUYERS OF
Hardwood Lumber
Handles
Staves Hoops
Headings

James WEBSTER & Bro.
Limited
Bootle, Liverpool, England
London Office
Dashwood House 9 New Broad St. E. C.

"Well Bought is Half Sold"

These Hardwoods Should interest YOU

50,000 ft. 1 in. No. 3 Com. and Btr. Black Ash.
3,500 ft. 6/4 No. 1 Com. and Btr. Black Ash.
50,000 ft. 1 in. No. 2 Com. & Btr. Winter-cut Basswood.
4,500 ft. 6/4 No. 1 Com. & Btr. Winter-cut Basswood.
70,000 ft. 1 in. No. 3 Com. and Btr. Birch.
1 Car 6/4 No. 1 Com. and Btr. Birch.
(With small per cent. Maple)

3 cars 1 in. No. 3 Com. & Btr. Elm.
1 car 2 in. No. 1 Com. & Btr. Elm.
1 car 3 in. No. 1 Com. & Btr. Elm.
3 cars 1 in. No. 3 Com. & Btr. Winter-cut Hard Maple.
2 cars 5/4 No. 2 Com. & Btr. Winter-cut Hard Maple.
4 cars 6/4 No. 2 Com. & Btr. Winter-cut Hard Maple.
3 cars 8/4 No. 2 Com. & Btr. Winter-cut Hard Maple.
(not over 10 per cent. No. 2 Com. in last three items)
1 car 4 x 6 in. Sound Hardwood Hearts.
2 cars 3 x 6 and up Sound Birch Hearts.
½ car 4 x 6 and up Sound Birch Hearts.

We shall be glad to quote you on the above

Graves, Bigwood & Co.

MANUFACTURERS OF

Pine
Hemlock
Hardwood } **LUMBER**

TORONTO OFFICE:—712-20 Traders Bank Bldg.
Montreal Office:—327 Coristine Bldg.
Mills: Byng Inlet, Ont.

PETRIE'S MONTHLY LIST of NEW and USED WOOD TOOLS for Immediate Delivery

Band Saws

54" McDonough, horizontal.
42" Fay & Egan power feed.
32" Crescent pedestal.
28" Ballantine, bracket.
26" Crescent pedestal.
26" tilting table, pedestal.

Saw Tables

No. 1 Crescent.
No. 3 Crescent universal cut-off gauge.
No. 5 Crescent, sliding top (2).
Ballantine variable power feed.
No. 257 Berlin power feed rip.
Fisher, iron frame rip
12' Defiance automatic cut-off.
MacGregor Gourlay power feed cut-off
Greenlee automatic cross-cut.
Champion combination wood top.
Canadian steel frame pole saw.
6½' Williams wood frame swing.
5½' Crescent swing (2).

Planers

30" Whitney pattern single surfacer (2).
26" double surfacer.
24" Cowan revolving bed.
24" Champion planer and matcher.
16" Canada Mach. Corp. pony planer.
15" Woods planer and matcher.
12" Fisher buzz planer.

Sanders

24" Fay double drum.
18" Crescent disk and drum.
12" Canada Mach. Corp.

Moulders

13" Clark-Demill four side.
12" Cowan four side.
12" Woods, four-side.
10" Houston four side.
8" Dundas, four-side.
6" Cowan four side.
6" Dundas sash sticker.

Mortisers

M190 Cowan hollow chisel.
Galt upright, compound table.
No. 1 Smart foot power.
No. 2 Smart foot power.
No. 5 New Britain chain.

Clothespin Machinery

Humphrey No. 8 giant slab re-saw.
Humphrey gang slitter.
Humphrey cylinder cutting-off machine
Humphrey automatic lathes (6).
Humphrey double slotters (4).

Miscellaneous

MacGregor Gourlay 12 spindle dovetailer.
Fay & Egan 12 spindle dovetailer.
M80 Cowan dowel machine.
No. 1 Ballantine dowel machine.
Crescent post boring machine.
Cowan geared post boring machine.
New Britain drawer lock machine
M137 Cowan sash clamp.
Egan sash and door tenoner.
Dundas double head tenon machine
3" Pringle & Brodie variety lathe.
16" Ideal wood lathes
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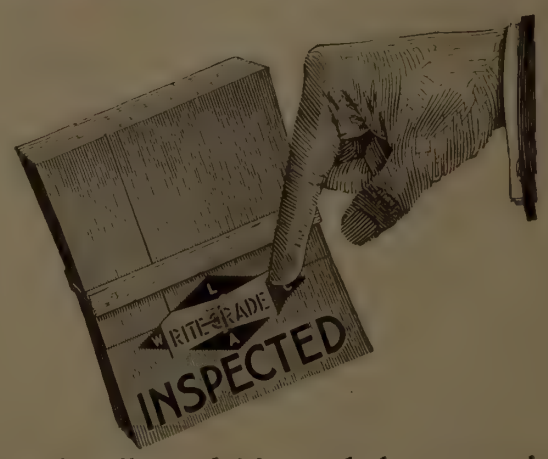

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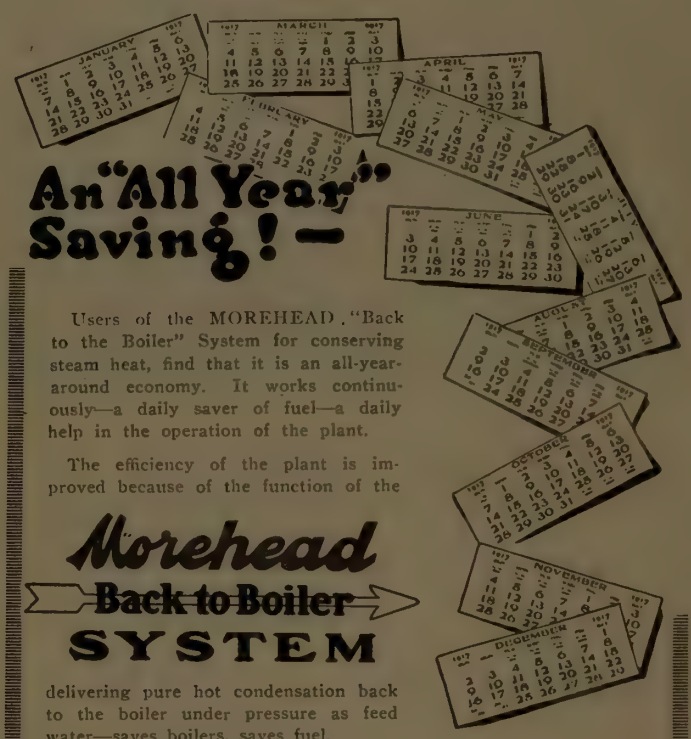

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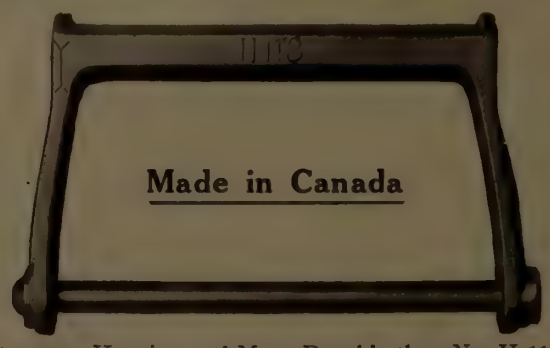

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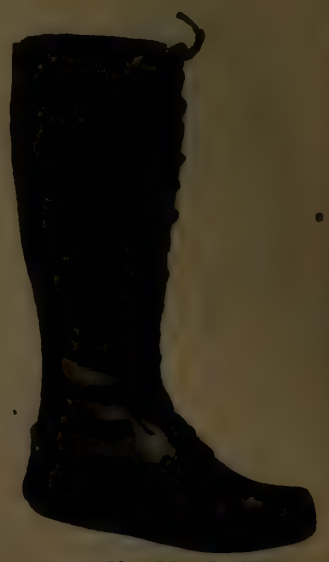

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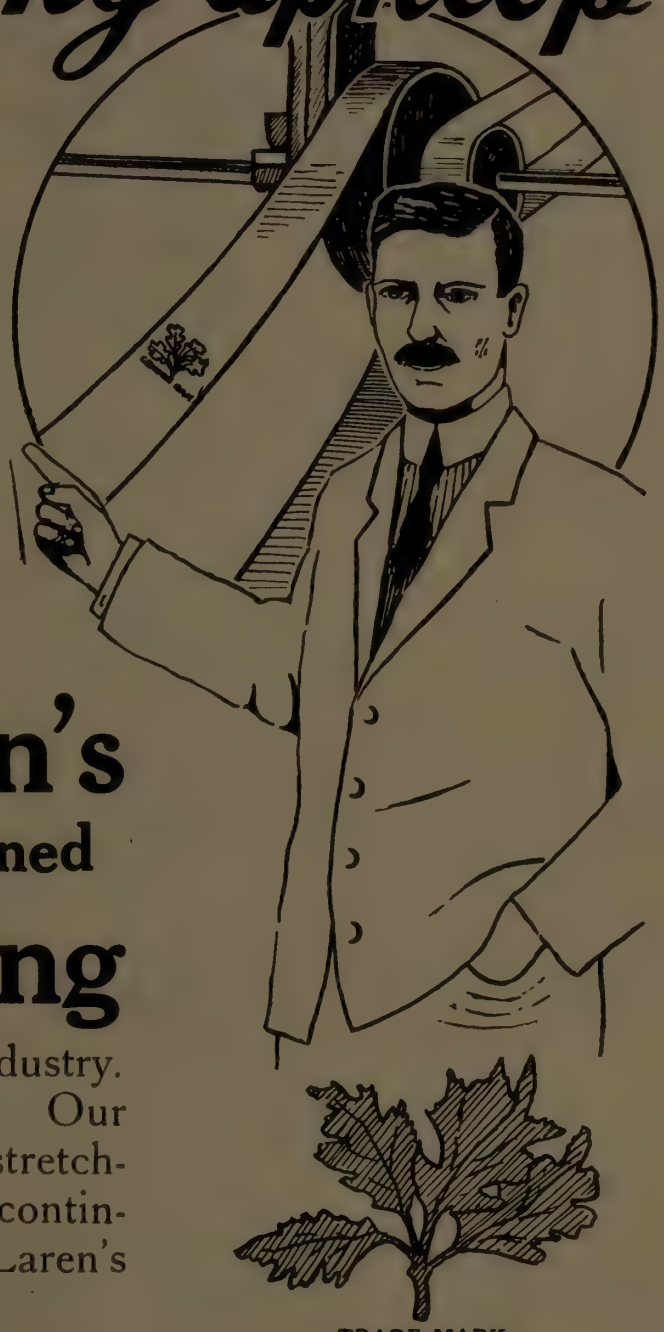

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TERMS OF SUBSCRIPTION

Canada, United States and Great Britain, $2.00 per year, in advance; other foreign countries embraced in the General Postal Union, $3.00.

Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster-General for Canada, for transmission as second-class matter.

Entered as second-class matter July 18th, 1914, at the Postoffice at Buffalo, N.Y., under the Act of Congress of March 3, 1879.

Vol. 37 **Toronto, September 1, 1917** **No. 17**

Guesswork Leads to the Poorhouse

Judging from correspondence received recently, several articles which have been published in the Canada Lumberman dealing with the problem of cost accounting for the retailer and for the millwork manufacturer have touched a vital spot with many dealers. More and more it is becoming clear to the trade that in the past a great many firms have been too well satisfied with the easy-going methods that have grown up in their accounting work, and have not understood how closely they are travelling to the edge of a business precipice, until it was too late, or until some unexpected event has cleared their view temporarily and shown the dangers they were courting. Without having made any attempt to gather representative information from a large number of firms on this subject, it has been forced home to us lately that these conditions prevail with a large number of firms, and are not confined to those that are in a small way of business, but may be found in retail and millwork firms, both large and small. However, whether on account of the closer scrutiny of business methods that is being brought about by the war, or on account of a natural reversion from the former state of things, it is true that a great many such firms are housecleaning their accounting offices and installing more efficient methods which will guard them against the pitfalls into which some of their less fortunate fellows have fallen.

Some of the letters received contain remarkable confessions of shortcomings, but are none the less genuine. For instance, the whole situation as it is presented by these letters is forcibly and briefly told in one of them, written by a firm which formerly was getting along well enough, but which of late has been compelled, by the stringency of trade, to turn its critical eyes inward in a way which it never thought of before. "We read with interest your article in the August 1 issue about proper cost accounting ensuring success," this firm says in its letter. "We agree with you when you say that a great deal of business in millwork is guess-work, **and we are no exception.** We are willing to pay anyone who can outline to us a cost of material and selling price system that will show the proper way of doing business. We operate a woodworking factory and also do building. **We have a very good business, but are not making the money we should, and the reason is too much guess-work.**" Other firms have written in a similar vein, and those with whom we have talked about it have invariably corroborated these conclusions. One firm, for instance, which carries on an exceptionally large business and has been in operation for many years, took the matter up recently with the intention of enquiring into it thoroughly and introducing new methods if they were found to be necessary. The accounting system which this firm had developed was considered to be suitable and quite sufficient for their enormous volume of trade; but upon making a close and scientific study of the system, it was found not only to be inefficient but cumbersome. To make a long story short, this firm is now installing, in connection with its millwork business, a thoroughly efficient, flexible, and easily-understood accounting system, which will enable it in future to know exactly the cost of every article it produces. It will be able then to quote intelligently and to count upon showing a profit for everything it sells. Imagine what this must mean to a firm whose business amounts into hundreds of thousands of dollars annually. Not only will it sell nothing more at a loss, but in figuring upon competitive bills it will quote prices that are safe, and get the business or let it go to some other firm which is not conversant with cost details and is figuring so close as to be unsafe. Ignorant competition is the bane of millwork trade, and it will be a memorable day when the majority of firms learn how to abolish it. The existence of one or more firms in a town who are determined to estimate their costs properly and to get a good profit on everything will go a long way towards introducing better conditions generally. That this state of affairs will be brought about quickly is too much o expect, but the situation to-day is more encouraging than it has ever been before.

Closely connected with these matters is the question of credits. A loose method of handling credits and an inefficient way of estimating costs will do more than anything else to land a business in the hands of its creditors. Either one of these defects is quite sufficient for the purpose. With both problems solved, there is not a millwork or retail firm in existence that cannot weather the worst kind of industrial storm. The magnitude of these problems has been the great sticking point in the past. Many managers or owners have not been capable of analyzing their own cost conditions as they should be analyzed, or of introducing changes that are necessary. Others have hesitated because of the disorganization which they wrongly imagined that radical changes would involve; but some of them have found out by sad experience that a far more radical change was threatening unless they pulled up short. There are many others in the same quandary to-day, and the most valuable advice it is in our power to offer them is that they should start to-day and give the problems their fullest study until they have found a way out of the woods; and when they do see the light and get rid of their troubles, let them pass along the benefit of their experience to others. It is a big thing to have put your own house in order in this way, but it will be almost equally valuable to any firm to put its competitor upon the same track, and thus eliminate, so far as possible, all competition that is not based upon a sound knowledge of costs.

The Industrial Outlook

What the approaching winter will bring forth in the way of business conditions is being discussed more keenly to-day than is usual at this time of year. In the lumber business the trade situation is more important and interesting now than at almost any previous time, and it is exceptionally difficult to analyze, so far as the future is concerned. There has been a strong demand all through the year for everything that the sawmills have been able to produce, and much green stock has been taken straight from the saws. It has been impossible for the mills to produce as much stock as the market required, and had it not been for the fact that the railways were not able to move stocks fast enough, there would have been nothing at any of the mill points but bare yards. Such stocks as have been piled by manufacturers are practically all sold and awaiting shipment.

Many manufacturers have been disappointed in connection with the operations at their mills this season because they have not been

able to produce any surplus beyond the amount that they contracted to sell earlier in the season. Most manufacturers make a practice of trying to turn out some additional stock beyond what they have sold, so that they may be in the position to make a little extra profit out of it in case the market conditions improve. At the beginning of the present year the outlook was for continued advance in prices, and this has been more or less realized throughout the year, so that, if the manufacturers had been able to obtain sufficient labor they would have turned out larger stocks. However, manufacturers have done well on the whole during 1917, and the general opinion is that they will operate in the woods during the coming winter to the limit of their resources, regulated, of course, by the quantity of labor they can obtain.

Whenever one discusses the situation with manufacturers, the labor supply and the high cost of provisions and equipment are the only matters considered. Everyone agrees in regard to these factors, and expects that lumber prices will continue to stiffen, or at least will hold their present levels, well into next year. One or two wholesalers, however, report that the retail trade are not quite so ready to accept this interpretation of the situation, and if one takes into account the views of those who are engaged in other lines of manufacturing it becomes evident that other factors are getting a great deal of attention to-day. The retailers referred to above hold the view that prices of lumber have reached their high level and may be expected to recede. It is difficult to give weight to such views under present conditions, or to convince one's self that they are not more or less a case of the wish being father to the thought, but this opinion is held in many quarters.

It is probable that those who are anticipating a fall in prices, or a decline in trade conditions generally during the coming winter are influenced in their views by a study of the outlook in connection with the munitions industry. Inasmuch as the future of this industry is something no one can foresee, nothing can be said with confidence regarding it. All that it is possible to say is that of late the Imperial Munitions Board have not been letting contracts for munitions or for shell boxes to any like the extent that prevailed a year ago. This is interpreted by some as meaning that the British Government is gradually taking over the production of munitions entirely, and that Canadian plans will have less and less of this business in future. Certainly the actual course of events during the past twelve months points rather convincingly to this conclusion, but just as certaintly it is not reasonable to come to any conclusions one way or the other about such an unsettled matter.

Sooner or later the people of Canada must experience the end of the munition production business, and, from an industrial point of view, it will be better that the end should be brought about gradually than suddenly. There are a great many employees engaged in it at large wages, and when they are thrown out of employment it is a question whether the other industries of the country will be able to absorb them fast enough to prevent industrial depression. Undoubtedly these employees will, in a great many cases, be unable to obtain employment again at such good wages as they have been receiving, and this will have a decided effect upon the buying power of the people. We can look forward, therefore, to a marked effect upon trade whenever the munitions orders cease. It is with this fact in mind that many people, seeing the lull in the production of munitions that has prevailed lately, are anticipating price declines and industrial depression to some extent during the coming winter.

The sitaution has so many aspects that it is not wise to do much anticipating. Suppose, for instance, that the munitions business comes to an end and about two hundred thousand people who are engaged in the production of shells or in subsidiary industries are thrown upon the labor market, what result may be expected? In the first place, other industries which have been starved because of labor shortage—among them the lumber industry—are likely to benefit by the change, and to find that it is possible once more to operate nearly to capacity. It is probable, also, that a number of those who are thrown out of employment will enlist for service overseas. In short, conditions to-day are more favorable than many believe for absorbing labor that will be laid off when the munitions industry comes to an end, and if the change is brought about gradually there may be little disturbance during the readjustment. It will be well for the country if the change is brought about in such a manner. These matters are being discussed to-day in all quarters, and the course of the Imperial Munitions Board is being observed closely, in the belief that it contains the key to the situation.

One feature which must not be lost sight of is the possibility of important developments in connection with the munitions industry in the United States. If the war continues for some time, and the United States requires large quantities of munitions, it is more than probable that Canadian munition plants will share in their orders for some time to come, on account of the fact that they are already so well equipped for the work, and that it will take the United States a considerable time to organize and develop its industry as fully as required.

Helping One Another—The Spirit of Association Work

One of the interesting developments in connection with lumber association work in the United States which was hardly foreseen in early days, is the growth of co-operation between associations representing the different elements of the industry and the trade. This is a natural enough growth, in fact simply an enlargement of the work and the ideals which associations necessarily involve. The origin of association work in the lumber trade was more definitely among small local groups than anywhere else. Manufacturers in definite districts, and retailers similarly situated, found that by working together they could promote their mutual interests more successfully and aggressively than by individual effort. Some of these earlier associations failed and others succeeded, in proportion largely to the enthusiasm of their members, but a sufficient number of them weathered the earlier storms to establish the movement firmly, and the country by degrees became more or less honeycombed with associations of various types representing retailers, wholesalers, salesmen, millwork firms, manufacturers and logging operators. During the past five years, these associations have become so valuable an element of the life of trade, that there is absolutely no question about their now being firmly established as a permanent business institution.

Reaching out continually for new fields of activity and service, the leading spirits of the association movement have recently learned that the effectiveness of their work is not confined to their own individual business circles; that they are, in short, a part of a larger movement than their own, to the same extent as their own lines of business are integral parts of the whole lumber producing and distributing industry. The discovery of this fact has led to co-operation among the retail, wholesale and manufacturing associations, so that today, many of these associations are doing work of an importance and extent far beyond the conceptions of their founders.

Perhaps the most striking example of this is afforded by the National Lumber Manufacturers' Association of the United States, which founded a retail department last year and put in charge of it a man who had made a name for himself as probably the most aggressive manager of a retail lumber yard in the United States. Seeing how successfully he had put his ideas into practice, they took him over with the object of having him teach these ideas to retailers all over the country, thus showing them how to make greater use of their opportunities, how to become more successful, and at the same time more serviceable, to their customers. It might appear to some manufacturers at first that this kind of thing savoured a little of interference by the manufacturers with the private affairs of the retailers, but the truth of the matter is that the retailer has no private affairs of this nature. His success makes or ruins the manufacturing industry and probably the most important thing for the manufacturer to concern himself about, outside of his own producing affairs, is the welfare of those upon whom he depends for the sale of his product to customers.

It was with this idea in mind that manufacturers took the matter

in hand, and during the few months since this branch of their work was started, they have obtained the sympathy and the gratitude of the retail trade. It may be somewhat rash to make predictions in this connection, but there are those who already foresee the coming together of all the lumber associations in the United States in order that the different branches may be more effective and successful. This centralization of work in connection with matters of mutual interest is the germ of association work and apparently, in a much wider sense, will become its goal.

The situation in Canada presents a disappointing contrast with that in the United States. Whatever the cause may be, association work among lumbermen in Canada has only been partially successful. How to explain this, or to remedy it, is a difficult problem. It is not a question of locating blame, for those who have worked for the cause have only thanks due to them, but for one reason or another in a number of cases Canadian associations have passed away after a short life, or have not been able to arouse their members to sufficient enthusiasm to enable them to reach any encouraging approximation of their natural ideals. There is no reason, however, for discouragement in this situation. It is only by experience that we learn the proper ways of accomplishing things that are worth while, and lumber associations in Canada will some day become as strong a factor in the life of the industry and trade as they have become in the United States. We feel confident enough of this to assert it. Those associations which have succeeded are now numerous enough to offer valuable examples to others that are in their early stages.

There is one thing which the lessons of the past and the examples of the present point to strongly, namely, that association work can succeed only where it is absolutely unselfish in its ideals, aggressive in its methods and justified by existence of community of interest among its members.

In the early days, great lumbering firms developed and their successors today have inherited the spirit of independence which enabled their founders to overcome great obstacles. They maintain a natural feeling of pride in the achievement of their predecessors which sometimes keeps them from lending to the association movement the valuable aid they could afford to give it. But the day has come with the growth of producing facilities, accompanied by keener knowledge of selling methods, when this conservatism, well as it served its purpose in the past, is out of place. The associations of today call for something bigger, better and more manly. In Canada today, the lumber industry with all the competition it has to face from substitute materials and all the problems which it has to solve in connection with raw materials, labor, transportation and legislation, is at the crossing of the ways and is facing a crisis which is being intensified daily by the war, and will be greater probably than any of us can foresee. Nothing whatever in all the catalogue of business endeavor will serve to carry the trade through the mazes of industrial struggle which lie before it, so well as co-operation. No time given to this work now will be in vain. The times are calling for it, industry and trade need it and the lessons drawn from the past show how to go about it today with practical confidence of a successful outcome.

A Character Talk to Business Men

It Takes all sorts of men to make up a world, and one of the kind we meet sometimes in business is the man who is always grouching. Everyone knows him, and although we do not like to see him come into our offices, we often feel a bit of sympathy for him and wish we could set him upon the right track. There are not many of these men in the lumber business. Somehow or other the diversity and importance of the lumber business makes men bigger and more tolerant than those in most other lines of trade, but now and then one of these chronic grumblers turns up. There are only two things to do with such a man. One is to discourage him and make his troubles still worse. The other is to hold him up before himself for examination, and sometimes this drastic kind of treatment does him a world of good. Here is the way it was done recently by a successful lumberman when one of these fellows called. The story is told by a contributor to the Southern Lumberman, and we give a summary of it because of its human interest and because of the unique nature of its chief points. The grouch and the successful business man had finished their talk, and as the former was about to leave he opened upon the latter with a list of his troubles. Having started, he continued until he had poured them all out, and then the successful business man gave him his reply. This is what he said:—

"Smith. did you ever go to a picture show? And did you ever see on the screen a horrible picture that you did not like? Well, now, if you wanted to remove that disagreeable picture, would you try to rub the picture off the screen, or would you go back to the picture machine and change the slide? Perfectly simple! Of course you would change the slide and the picture would be changed instantly, whereas all the rubbing and scrubbing on the screen would never remove it. And that is exactly what you need to do.

"Your consciousness is, figuratively speaking, a moving picture machine, and you've a bum set of slides, that you need to get rid of. Just change those slides that you are using and get an entire new set and you will have a very different lot of pictures from the ones you have just outlined to me. I don't know a thing about your home life or your habits, but I can pretty well tell you the kind of slides you are using in your machine most of the time. For instance, you go home in the evening and you get cross because the baby cries, you growl because the dinner is either too late or too early, you fuss at the wife because the coffee is too cold or too weak, you think the rest of the family are out of sorts and nothing suits you; you get up in the morning, your eggs are either too soft or too hard, the paper boy is late with the morning paper, you start down town and get out of patience because you just missed a car, then you get sore because a good-natured fat fellow sits down beside you and you think he is taking more than half of the seat, you inwardly bawl out the street car company for its slow cars and rotten service, and then when you get down town you go through the rest of the day grinding out nothing but these bum slides all day long.

"Now. let's change your slides for a different set and just try it for one whole day and come back to see me tomorrow and let me know how you like the new slides. When you go home this evening just think what a happy sound it will be to hear the baby cry and take him up and have a romp with him, tell the wife how nice she looks when she meets you at the door, and if dinner is late, just say it doesn't make any difference, and give everybody in the house a chance to feel good, brag a little on how nice the coffee is, and incidentally make yourself interested in the different members of the family and how they have spent the day, and see just how many little things you can say and do to make everybody around you have a good time.

"All I ask you to do is to change your set of slides for the ones I am telling you about, and then come in to see me tomorrow. I want to hear the result."

The next day Smith reported, all smiles—he was a different man from the Smith of yesterday. He said, "Brown, that's the greatest set of slides in the world that you told me about yesterday. Why, when I got home last night the wife was all dressed up in a new dress and came down the sidewalk to meet me with the baby, there was not a single complaint from any member of the family all evening, and everybody had such a good time that we almost forgot to go to bed. The first thing this morning after reaching the office a man who I thought was trying to injure me came around with a proposition that means the straightening out of my business, and everything is just fine."

Changing slides was all that Smith needed in order to get a different view of things, and when he got the right kind of slides he found that his entire attitude toward life was changed. When things go wrong and the road seems "up hill all the way," let's remember that all we need is a new set of slides.

Canadian Hardwoods Active

The hardwood trade in Ontario, according to one of the most extensive wholesale firms, continues on an active basis, particularly with regard to exports to the United States. Much difficulty, however, is being experienced in making shipments, as most of the Eastern ports are under railroad embargo. There is still a great deal of lumber to be purchased during the present season. The fact that the trade has been well warned in advance of the certainty of a car shortage during the coming fall is inducing them to purchase some of their stocks ahead of time, and they are now coming forward with orders of this nature to a slight extent. If any stock can be said to be lagging at all it is probably some of the high-grade lumber that is used in interior finish, but there is enough other trade to take care of this class of stock so that even these lines are not seriously disturbed.

The present outlook is that there will not be as great a quantity of hardwood available after the end of the present year as there was when the trade entered 1917, and on this account it is reasonable to anticipate continued firm and advancing prices. Thick birch is in good demand for vehicle work, chiefly connected with war orders, and considerable 6/4 and 8/4 birch is also coming into this line of work.

There is a reasonable demand from the furniture trade, and a peculiar feature is that, notwithstanding a lack of building operations, there is a good demand for hardwood flooring. The low ends of hardwood are being taken up as fast as they appear.

Plenty of Aeroplane Spruce

The special mission of the Allied Aircraft Board have been paying an extensive visit to spruce manufacturers on the Pacific Coast. Recently they visited a number of American cities in the States of Washington and Oregon and conferred with manufacturers regarding supplies of spruce. As a result of the conferences they have complete assurance that a sufficient quantity of spruce for the aircraft requirements of the allied governments will be forthcoming promptly. It is estimated that within the next twelve to eighteen months the allies will require 117,000,000 feet of spruce. Special committees have been appointed in the spruce-producing districts of these states to attend to the details of the work of production.

Information received recently is to the effect that spruce is the only wood the exportation of which will be restricted under the law which gives President Wilson the power to control exports. Under the new arrangement spruce exports will be subject to license, which can be obtained from the Exports Council. and these licenses will make it unnecessary to get further permission from the British authorities to make shipment. The price will be the same to the allies as to the United States Government, namely $105 per thousand feet. As to other woods, it will still be necessary for exporters who desire to send stock to the United Kingdom to get licenses from the British timber controller.

High Lead System Subject of a Lawsuit

The widespread use of the high lead logging system which has developed of late years on the Pacific Coast, both in the United States and Canada, is causing many loggers to take a close interest in a lawsuit that has been filed by the estate of H. D. Robertson against the Campbell Lumber Company. of Seattle, Wash., which operates a logging camp and sawmill near Redmond. The company is being sued for an infringement of a high lead patent. The plaintiff claims that the late Mr. Robertson in 1905 obtained a patent which it is alleged has been applied by the Campbell Lumber Company, and is now generally in use elsewhere. The plaintiff states further that Mr. Robertson "was the true and original and first inventor of the high lead logging apparatus, and that it has been and is a great advantage to the logging business, and that the estate and heirs of the late Mr. Robertson will realize and receive large profits from the invention if not prevented from the use thereof. The plaintiff asks damages as a result of the alleged infringement, and requests that an injunction be issued preventing the Campbell Lumber Company from using the high lead patent.

Skillings, Whitneys & Barnes Reorganized

The Skillings, Whitneys & Barnes Lumber Company, for many years a $1,000,000 Massachusetts corporation. with headquarters in Boston and large yards and mills in Ogdensburg, N.Y., has been reorganized into a $810,000 New York corporation, and the headquarters will hereafter be in Ogdensburg. The reason for the change is that there has been a gradual change in the character of the business, and the greater part of the company's property and interests is now centered at Ogdensburg. Dewitt C. Culver, of Ogdensburg, has been elected president and treasurer of the new company. David N. Skillings, of Winchester, Mass., is the secretary and a member of the board of directors. The other directors and principal owners are David C. Whitney, Detroit, Mich.; Henry J. Bartlett, Orillia, Ont.; Senator George Gordon, Cache Bay, Ont., and George L. Ryan, Ogdensburg. The Boston offices will be continued as the principal sales offices for the New England territory, with George L. Davis as manager. Sales offices will be continued in other cities as heretofore, without special change in the sales organization. The company deals extensively in Western and Northern woods of all kinds.

Would You Consider This Profiteering?

The high rates for ocean vessel space have seemed to shippers to involve profits beyond the reasonable limit, even taking into account the great risks of destruction that must be run. There are some elements of the situation, however, that shippers may overlook, and by way of presenting the other side of the case in one of its aspects we publish a letter which appeared recently in "The Timber News," of London, Eng., from which readers may draw their own conclusions. The letter is as follows:

Sir,—We are the consignees of the cargo of spruce deals per a Danish sailer, 1,123 tons, from St. John, New Brunswick, which has just arrived in the Mersey.

The ship had a most eventful voyage, replete with vicissitudes from the time she left this side in ballast(about ten months ago) to load the cargo.

Having regard to the loss of time and a heavy repair bill, the voyage must have been anything but profitable to the ship, notwithstanding the high freight.

When she arrived at the Bar, one day last week, she met with another pleasant little surprise by way of adding to the loss on the voyage, viz., in being asked £300 for towage up. The captain promptly refused, and came up under his own sail, and we must say we admire him for his pluck.

The tug followed on behind, and all she got out of it was the docking charge at the statutory rate.

We don't say this is "profiteering," which word is not "popular" nowadays, nor do we use any adjectives or apply any opprobrious terms. Yours, etc., H. W. Lightburne & Co., Liverpool.

The Hardwood and Spruce Concessions

The Timber Trades Journal, London, Eng., in a recent issue, says: "It is to be much regretted that the orders issued by the Board of Trade are not compiled more lucidly, so that the much-ordered timber trader can gain from their perusal what is their exact meaning. As a rule, every new order requires an explanatory supplement. The softwood trade were congratulating themselves that the relaxations of restrictions on the imports from Canada and the United States would be of help to them, as they will prove to be, but very few were of opinion that the order also referred to hardwoods. In reply to enquiries made, we have received from the Deputy Controller of the Department of Import Restrictions of the Board of Trade notice that all descriptions of timber may be imported into this country from Canada and the United States of America when carried in neutral sailing vessels, under license; and that a general license has been issued to H. M. Customs to admit into this country (without a special license from the Board of Trade) all descriptions of timber when carried as deck cargoes from Canada and the United States of America. We also learn that sailing vessels may be chartered before applying for a license, and that licenses will be positively granted after the vessel is chartered. provided the vessel is a neutral sailer."

Increasing Hardwood Production Costs

At the recent semi-annual meeting of the National Association of Box Manufacturers the chairman referred to trade conditions as follows:

"I want to speak of lumber conditions as they exist in the West to-day. In Chicago we get lumber from all parts of the country, with the exception of the East. Yellow pine producers are now selling their lumber to the United States Government, at the mill, log run. for $35. The average price for yellow pine lumber during 1916 was $17.40. That gives you some idea of the advance in price of yellow pine. The market for other classes of Northern hardwoods has advanced in somewhat the same proportion. Cottonwood is so high in price that it is practically eliminated, and is not in the competitive class any longer as a box material. Gum has gone up about the same as No. 4 boards.

"Prices on nails are about three and a half times what they were three years ago. Everything we use in the way of supplies has gone up, such as belts, planer knives, oils, files, etc.

"Next to raw material, wages is the most important item in manufacturing the products we sell. We are paying labor high wages—double what we paid years ago. Still, I do not see how the men can live to-day, even with the high wages, when they have to pay such high prices for everything they use. I wish we could afford to pay

more. But the wage feature is not the bad part of the labor problem. The real difficulty for us is to get the men to operate the plant. Labor is shifting around a great deal. Some men are going to war in France; others are enlisting in the army, or are drafted for this great army we are raising, and we have left a very inefficient quota of men to do our work.

"Some criticism has been made that manufacturers are trying to ride the present market too hard. But so far as our business is concerned, I do not see how we can pay the high lumber prices, and the higher prices on everything else, and not get more for our products. That is the thought I want to impress upon you. In this connection I want to say something else to you. You may have a large supply of lumber in your yard which you have bought at low prices before the rise in the market. Let me tell you, the men who are making money, or will make money. in the box business are those who base their prices on the lumber market and the supply costs as they are to-day, and not upon the prices they have paid for these materials. For as soon as you use up the lumber you have in the yard you are forced to go out on the market and replace it with higher priced stock."

Special Commission's Report on European Markets

Everywhere in America and in England, the pine of the provinces of Quebec and Ontario is known as without equal in the world. In France there is little interest in its qualities. British Columbia fir, thanks to the extensive propaganda by the government of that province, is beginning to be appreciated in certain places, but it has a formidable competitor in the pitch pine of the United States. With the freight charges in existence even before the war, it was impossible for Canadian woods to compete with the products of European countries. When it is considered that in normal times the cost of transportation constitutes over 40 per cent. of the selling price of wood in the French market, it will be seen that the freight rates are one of the most essential factors of this business.

The cost of transportation, revealed by the above proportion, does not seem at all justifiable, especially if it be compared with the cost of transportation of lumber coming from the ports of the Baltic Sea.

The lack of direct steamship communication is another obstacle and one of the most serious. Our exportation has been carried on almost exclusively through England. On the English market our British Columbia wood is robbed of its national character. It is lost in the midst of the products of other countries and is sent to France under names that in no way indicate its origin. At times even dealers sell it as wood from "the North." Our forest products have an undeniable value, and it is essential that their value be known in France and attributed to Canada, in order that our merchants and the country at large may reap the benefit.

In order to secure a place in the French market, Canadian producers must first of all make Canadian products known. To attain this end, there is but one practical and efficacious way, namely, to show them to possible purchasers. Printed matter, advertisements and lectures by commercial agents will never convince the French people of the value of our merchandise. They must see it, feel it and be convinced for themselves.

Again, our merchants must come into personal contact with the French market in order to thoroughly understand its needs and even its smallest requirements, if they wish to compete with other countries. In this connection it will be well to remark that Canadian lumber should be more carefully sawn and also more in accordance with the dimensions required by the French market. Merchants of the Dominion should also realize the importance of providing their salesmen with all the information necessary in order to reply to the questions of the French consumer, such as the weight of the wood per cubic metre, per standard, etc.

Canadian Conditions Discussed in Louisville

An interesting discussion of conditions in the Canadian lumber industry was heard at a recent meeting of the Louisville Hardwood Club. W. H. Stubbs, Canadian representative of the Card Lumber Company. of Chattanooga, a guest at the meeting, gave some personal experiences in this connection. Mr. Stubbs stated that the piano trade had been very hard hit, being unable to obtain skilled men, especially in the woodworking departments. One good customer in Canada had lost 37 men recently, and was almost forced to close down the woodworking shops, being unable to obtain men to replace those lost, the skilled laborers in many cases going into the army far more readily than unskilled labor. This piano manufacturer had been forced to buy piano cases from New England manufacturers, paying a duty of 30 per cent. and a war tax of 7 per cent., but had been unable to do anything else in face of the labor situation. Construction companies had also been having their troubles, and in several cases had been unable to complete contracts within specified time limits. However, business in Canada was good, but would be far better with a fair supply of labor.

From the Canada Lumberman of Thirty-five Years Ago

Hemlock to the Fore

Hemlock is fast attaining prominence as one of the most valuable among the soft woods. Its adaptation to numerous uses is being more fully recognized, and this once despised wood is coming prominently to the fore as one of the most useful in the catalogue. The memory of the writer carries him back to the time, not very many years, either, in the vista of the past, when in the purchase of lands for lumbering purposes in the Saginaw Valley, hemlock was left entirely out of the calculation, and thousands of acres containing vast quantities of hemlock have been allowed to revert to the state after the same had been denuded of the pine, because the hemlock was considered practically worthless except for the bark, and that could not be utilized because of the lack of transportation. These hemlock lands loomed slightly into prominence a few years since at the time of the hemlock extract boom, when several extract factories were established in the state, but the "great expectations" of the stockholders in hemlock extract bonanzas appear to have vanished into thin air or in a fruitless search for profits which their projectors had promised. Up to within a few years hemlock was considered worthless, except for fencing, joists, or for some of the purposes for which rough, coarse lumber was demanded. But as pine has advanced in price and is growing scarcer, necessity has demonstrated that hemlock is especially adapted, not only for coarser work, but also for inside finishing, and is being utilized in its natural state . . . . . being found capable of extraordinary fine polish . . . . . for such purposes, in some very expensive structures. As an illustration we might cite a church in a neighboring city, finished principally in hemlock in oil, in which is displayed some of the most beautiful specimens of natural graining, in the panel work, which can possibly be produced. It has been ascertained that hemlock is adapted for almost any of the uses to which the soft class of woods has heretofore been applied. The popular favor with which it is being received has resulted in rapidly enhancing the price of the lumber, as well as the lands on which the timber is located, and hemlock stumpage has appreciated in value to such an extent that in some sections it is ruling higher than that received for pine land stumpage a few years ago. This may have been partially induced by the speculative mania which has lately set in for the possession of timbered lands, but not wholly so; and because of the utility of the lumber for almost every conceivable purpose, it is safe to predict that hemlock will maintain a much higher figure in the future, and be received with much greater favor than in the past, and those who through foresight, or inability to dispose of them, have retained possession of these lands, will find they have struck a bonanza.

The Silent Moment

The trouble with most salesmen is not that they talk too little, but that they talk too much. They should learn that in every argument with a customer, or an intending customer, there should be a cessation of the flow of talk—a rest period, so to speak—in which the buyer can think. I call it the "silent moment." In every deal it should be observed. The customer likes to think he makes the decision.

When you have presented the case—stop talking. Let the customer think it out. I have seen many salesmen talk themselves into a purchase and then talk themselves out of it. It is the power of the suggestion that counts. The customer does not like to be driven. If he does buy after a forced sale he will never return. Give him time to think the proposition out—only be sure he is thinking your way. Make your statement brief, forceful, and then rest.

In making a sale don't argue. It arouses opposition. In advertising, nothing is more futile or useless than to carry on an argument. Avoid the direct assertion that your goods are the best in the world. State it as if it were a recognized fact. In writing your advertisements you can rely on such statements as "as is well known," "as you know." And don't attempt to say too much. My rule is to take only two big "leads." The people can't take any more than that. For example, if you say. "As you know, goods bought at our store will be delivered at 3 p.m.," you have not exceeded improbability—you have struck at a live feature of your service, and you have not argued. Let the power of that suggestion work in the customer's mind. Indirect suggestion is even more powerful than the direct. The primitive emotions are keener than the intellectual. Sixty-seven and a half per cent. of men's grouches are pure imagination. A person may never be won by argument. He may never see the force of your statements made in print, but if he is caught by an indirect suggestion he will fall nine times out of ten.—Dr. Stanley L. Krebs.

Kiln Drying Lumber—Its Main Problems

Principles of Compartment and Progressive Kilns Clearly Explained—Different Methods of Piling Stocks for Artificial Drying Treatment

Kiln-drying lumber is the subject of a special report upon the seasoning of wood published as bulletin 552 by the United States Forest Service. Lumber is kiln-dried, the report says, when there is need for seasoning it quickly of when the manufacturer does not wish to carry large stocks in his yard. A kiln is used also to further dry partially air-seasoned or even fully air-seasoned material, for special uses.

The main problem in kiln-drying lumber is to prevent the moisture from evaporating from the surface of the pieces faster than it is brought to the surface from the interior. When this happens the surface becomes considerably drier than the interior and begins to shrink. If the difference in moisture content is sufficient, the surface portion opens up in checks.

The evaporation from the surface of wood in a kiln can be controlled to a large degree by regulating the humidity, temperature, and amount of air passing over the wood; and a correctly designed kiln, especially one for drying the more difficult woods, should be constructed and equipped in a way to insure this regulation.

A dry kiln may consist simply of a box in which lumber can be heated, or of a good-sized building or group of buildings (battery) containing steam pipes, condensers, sprays, and various air passages capable of adjustment to regulate the amount of ventilation. The elaborateness of the kiln depends, of course, mainly upon the value of the lumber that is to be dried. For lumber worth $100 per 1,000 board feet, it obviously will pay to use more careful drying methods than in handling material valued at $20 or $25 per 1,000 board feet.

Types of Kilns

Kilns for drying lumber may be divided into two general classes, as shown in the illustrations: (a) compartment kilns, and (b) progressive kilns. In compartment kilns the conditions are changed during the drying process, and all lumber in the kiln is dried at one time. The conditions at any time during drying are uniform throughout the whole kiln. In a progressive kiln conditions at one end differ from those at the other, and the lumber is dried progressively by being passed through the kiln. Compartment kilns are used when it is desired to dry lumber of various sizes and species, while progressive kilns are used where uniform stock is handled.

The methods of operation generally used in lumber kilns are: (a) natural ventilation, (b) condensing, and (c) superheated steam.

In kilns operating by natural ventilation, the humidity or dampness is controlled by the use of escaping steam and evaporated moisture. Circulation in progressive kilns is largely longitudinal and in compartment kilns transverse. Moist air is allowed to escape from the kiln.

In condensing kilns the humidity is controlled by recirculating the air, which has taken up water from the lumber, across water pipes or through water sprays. The temperature of the pipes or sprays governs the amount of water that condenses from the air, and consequently regulates the humidity of the air when reheated before being passed over the lumber again. The circulation of air may be either natural or forced. Cendensing kilns are generally of the compartment type.

Kilns operating with superheated steam are used only where the species to be dried are not injured by high temperatures, and where fast drying is essential.

Lumber may be piled on the trucks which carry it into the kiln in any one of three ways, as illustrated: (a) fiat or horizontal, (b) edge or vertical, and (c) inclined. Flat piling is best for longitudinal circulation. It is not so well adapted for transverse circulation, and is not economical for downward circulation. Vertical piling increases the truck capacity, as there are no vertical spaces between the boards. Probably it is the best method for downward or any fast circulation. Provision has to be made, however, for keeping the boards in place in the stack. Inclined piling allows for a definite movement of air either downward or upward (forced draft). It is an improvement, as regards circulation, over horizontal or flat piling.

Some kiln operators using the flat or horizontal method of piling report excellent results from the construction of a V-shaped opening in the centre of the truck pile. Such openings are from 2½ to 3 feet wide at their base, and from 3½ to 4 feet high. Where this practice is followed it is customary also to place the boards in the layers closer together as the top of the stack is reached, to force greater lateral circulation.

In loading lumber on kiln trucks by any one of the three methods mentioned, the stickers should be of a uniform thickness and arranged in the piles in alignment.

It is advisable also not to attempt to dry various thicknesses of lumber together. Thick lumber takes longer to dry than thin lumber, and when different thicknesses are mixed the operation has to be governed by the thick stock, to the possible detriment, or at least the unnecessarily long drying, of the thin stock.

Preliminary Treatment

Lumber to be kiln-dried is sometimes steamed in a separate compartment before being placed in the kiln proper, especially where the kiln is not designed for moist-air treatment. In transferring lumber from a compartment for preliminary treatment to the kiln proper, every care must be used to avoid a sudden change in humidity. The object of the steaming is to heat the lumber and thus make easier the transmission of moisture from the interior to the surface, and also to moisten the surface in case it has become case-hardened or "set" during partial air drying. Other effects, also, are produced, which to a greater or less extent change the properties of the wood. The "sap" in the wood is changed by "cooking," as indicated by a darkening of the wood, the degree of coloring depending upon the temperature and duration of the process. Other changes of a chemical nature apparently also take place in the wood during steaming.

The pressure and duration of steaming desirable in kiln-drying

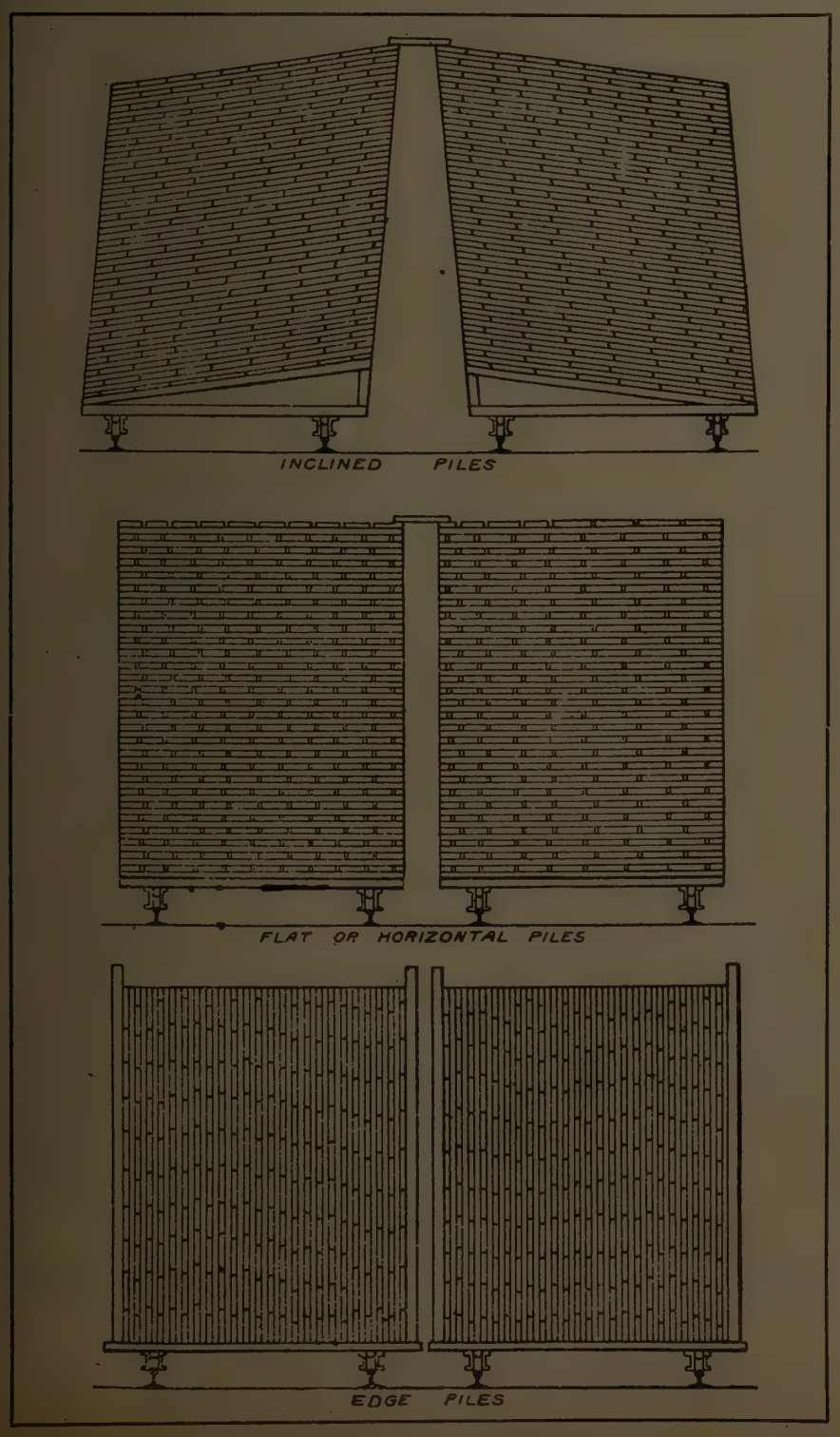
COMPARTMENT KILN

PROGRESSIVE KILN

have not yet been thoroughly worked out. Durations of from 5 minutes to 24 hours or longer, and pressures ranging from atmospheric to 50 pounds gauge, have been used in practice. The higher the pressure the greater is the effect produced, and the longer the time the more thoroughly the treatment penetrates the wood. Experiments have shown that a pressure slightly above atmospheric for 24 hours will slightly darken 2-inch maple clear through, and a pressure of 40 pounds will turn oak and probably other hardwoods almost black. Even where the strength of the wood is not the primary consideration, it probably is not safe to exceed 15 pounds gauge pressure (250 degs. F.), except for special purposes.

The Process of Drying

After the wood has been heated thoroughly in a humid atmosphere, either in the kiln proper or in a separate compartment, it is ready to have the moisture removed by evaporation from the surface. In kiln-drying uniform circulation apparently is the most important thing to be secured. The fact that air when it enters the drying chamber will be cooled, and therefore will tend to fall, should govern the method of piling and the direction of circulation. This means that the air should be allowed and assisted to pass downward through the pile, either by entering at the top of the pile or by an adaptation of this principle to other methods of piling. The rate of evaporation may be controlled best by regulating the amount of moisture in the air (relative humidity) circulating about the lumber in the kiln; it should not be controlled by reducing the air circulation, since a large circulation is needed at all times to supply the necessary heat. Air at 100 per cent. relative humidity contains all the water it can carry and has no effect in drying wood. If, however, the humidity is reduced to 90 per cent. and the air then passed through a pile of wet lumber, the air can take up a certain amount of moisture. If drying does not progress rapidly enough with the circulating air at 90 per cent. humidity, it may be reduced still further. This may be accomplished by ventilation, by condensers, by water or steam sprays, or in a number of other ways. Any well-made kiln which will allow the control of the humidity, temperature, and circulation of the air passing over the lumber should give satisfactory results. If checking begins during the drying process, the humidity should be increased until it stops. Steam jets in a kiln are often useful for this purpose. In changing the humidity the circulation should not be reduced. A large body of moving air is necessary in order to keep a uniform temperature clear through to the centre of each piece of wood in the pile and at the same time supply the heat required for evaporation. If sufficient circulation is not secured, the supply of heat for both purposes will be lacking and the material will not dry uniformly.



The maximum rate of drying at a given temperature is reached when moisture is evaporated from the surface of the wood just as fast as it is transmitted from the interior. This rate is fixed by the rate of transmission of moisture within the wood and varies with different woods.

The temperature of drying apparently influences the rate of transmission of moisture within the wood. The higher the temperature of the wood the more rapid is the rate of transmission of the moisture, and hence the rate at which the moisture may be evaporated safely. This, of course, applies only to temperatures below those which might result in injury to the wood.

Drying tends to render wood more or less brittle. Although the strength of wood increases with its degree of dryness, yet wood which has been dried and resoaked is less resilient than when green. Therefore, where strength is the prime consideration, it is preferable not to dry the wood beyond the degree at which it is to be used. The final stage of kiln-drying is generally conducted at a humidity somewhat below the actual humidity that on long exposure would produce the same average moisture condition. This is done in order to hasten the drying and to make it uniform throughout each piece.

St. Maurice Paper Company's Equipment

Much of the machinery and equipment of the various plants of the St. Maurice Paper Company, a reference to which was published in the Canada Lumberman of August 15, was furnished by the Waterous Engine Works Company, Ltd., Brantford, Ont. The St. Maurice Paper Company is one of the most extensive operators and manufacturers in Quebec Province. An idea of its size may be gathered from the following list, furnished by the Waterous Company, of some of the important machinery and equipment at the different plants:

Sawmill at Three Rivers—Power plant, consisting of boiler and twin engine, made by Waterous Engine Works Company; log haul-up, log deck machinery, double cutting band-mills, carriage, circular gang, etc., made by Waterous Engine Works Company; horizontal band-resaws, made by Giddings & Lewis. Pulpwood department—Log haul-up and seven-saw slasher, made by Waterous Engine Works Company; barking drums, made by William Hamilton Company, Peterboro, Ont.

Ground wood mill at Cap Madelaine—Six pulpwood grinders, made by Jencks Machine Company; nine pulpwood grinders, made by Waterous Engine Works Company; vertical Quiller screens, made by Waterous Engine Works Company; wet machines, made by Sherbrooke Machinery Company.

Sulphite and sulphate mill—Horizontal Quiller screens, made by Waterous Engine Works Company.

Sawmill at Charlemagne—Sawmill machinery, mostly by William Hamilton, Peterboro, Ont.

Sawmill at St. Gabriel de Brandon—Partly Waterous machinery.

Going Abroad for Canadian Ship Timbers

A despatch from Chicago states that the Edward Hines Lumber Company has received an order from the Canadian Government for timbers for ten wooden vessels, calling for 3,460.000 feet of Douglas fir. A large part of this order, it is stated, will be furnished from the Chicago yards, and six vessels have already been loaded from these yards. Some of the timber, however, will be shipped from the Pacific Coast and be rushed through with all possible speed by the railroads. The report also states that material for two vessels will be delivered in Toronto, four in Quebec, two at St. John, N.B., and two at Montreal. The smallest size called for is 10 by 12 in., and they range in size up to 36 in. by 36 in. by 60 ft. in length. The same company has also contracted to deliver timber for four vessels to a private concern in Canada. These vessels will use 1,600,000 feet of timber, and the order is being filled from stock in the Chicago yards.

When Do You Consider Lumber is Sold?

The Manufacturer's Interest in Stock After Delivery to Purchaser—Co-operation Important to Assist Retailer in the Fight Against Substitutes

Libby, the Chicago meat packer, made this statement: "I do not consider my goods sold until the tin cans are lying in the alley." In other words. he did not consider his goods sold until the consumer had eaten the product contained in the cans, and thus paved the way for further consumption. The mere fact that the retailer bought his goods carried no weight, because the full cans on the retailer's shelves were merely an obstacle to further business and increased output.

But you say: "What do we care about Libby and the grocer? There is a heap of difference between him and the man who sells our product." The reply to this is that the grocer does not sell individual lines. He sells general merchandise, competitive and otherwise. Therefore, the burden of selling falls upon the shoulders of the manufacturer of general merchandise.

"The retail lumber dealer, however," you will then say, "is established along an exclusive line, confining his efforts mainly to lumber, and thus in order to exist he must sell the lumber, whether we help him or not."

But we must say in answer that as a matter of fact, and because of the apathy of the lumber manufacturer, the retailer is gradually being forced to sell other lines, particularly substitute roofings, cement, and wall-boards. Why is he compelled to carry these lines?

The wooden shingle output has decreased 20 per cent. since 1904. Fifty per cent. of all roofings manufactured represent substitution. The increase in substitute roofings for 1904 to 1914 was 200 per cent., or a displacement of 1,500,000,000 feet of lumber. The present day cement output represents more than half the total lumber cut. Wall and plaster board have increased enormously since their introduction a few years ago.

Then you ask: "Why should we help the retailer, and why does the retailer desert us and sell substitutes for lumber " In the face of these figures you must admit that it is up to you to help the retailer to sell your product, especially when you consider that 75 per cent. of the substitutes for lumber has gone to materials costing more than lumber.

Some of you gentlemen who are willing to get in and meet this competition are thinking: "What can we do? What can we do, for instance, against brick? Brick is a fine product; it makes a very lasting and beautiful exterior for a home. If you would consult the advertising fraternity who make it their business to make merchandising analyses they would tell you that only 322,000 families out of 20,000,000 in the United States are receiving incomes of $4,000 a year, and that only 516,000 are receivng incomes of $3,000, and only 1,000,000 families are receiving incomes of $2,000. These, mind you, are not individuals, but families which have to be housed. And on the psychological side they would inform you that millions of people annualy write to the magazines about building information, which means that in the brain of nearly every man and woman is an inherent desire and craving to own a home. Real estate concerns, loan companies, and others have used this craving to advantage.

Now, isn't it logical to suppose that the large percentage of incomes mentioned above cannot afford a brick home, and very naturally will turn toward a home built of lumber? In fact, answering directly that question, "What can we do against brick?" you are not very materially concerned on this score, beecause, as shown by these figures, only a small percentage of American families can afford to be housed in brick. Nevertheless, even when brick exteriors are inevitable, as in congested city centres, you may look after your lumber interests for the interior, and nevertheless a very large number of expensive homes have been built in the past, and should in the future, with proper management, continue to be built wholly of lumber. You, therefore, have a definite market for your product, and you must especially bear in mind that new construction is going forfward in the United States at the rate of more than a billion dollars a year.

What You Have to Do

What you have to do is to create in the minds of the people a desire for your kind of lumber, namely. Western white pine. Don't advertise lumber; advertise the home or the barn or other structure built of the kind of lumber you sell. Libby does not sell meat; he sells tasty, delicious morsels of bacon or tongue, or salmon, fit for a king. You must not advertise lumber; you must advertise the "Home, Sweet Home," of Western white pine, with kitchen of dainty white enamel, and all the modern built-in features. You must advertise the modern barn, the silo, and the implement shed, built, of course, of Western white pine.

You must not sell lumber for planked streets, but wood paving blocks. You must dissociate the rough plank street, with its bumps, jars, and splinters, from the minds of the public. and replace this vision with the everlasting, silent pavement.

You must dissociate the tumble-down barn and the unsightly, box-like home from the minds of the farmer and the farmer's wife, and create in their minds the attractive, modern home, and the business-like prosperous barn.

But some of fthe more pessimistic of you will say: "All woods are beginning to compete, one against the other, through this advertising." Do not be alarmed at this. It is a healthy sign, which argues well for wood and ill for substitutes.

The first breakfast food was a commercial failure, though well and cleverly advertised, but it was not until half a dozen came into the market and advertised that the ready-made breakfast food became a popular habit.

Now, as to the farmer: Here is, indeed, a new market and a new field that will take care of most of your losses from substitutes. It seems almost necessary that certain classes of buildings. particularly in cities, be built of cement and brick, but not so in the farm field. The farmer has emerged from a state of struggle and penury to one of affluence and a rosy future.

A nail, a board. and a hammer visualized the building of the farmer to most of us. He was mortgage-ridden, ridiculed. He was the under dog. To-day he has wealth. He is able to do things as never perhaps before; and this is not altogether due to war conditions. Whatever the true underlying fundamental economic reasoning, the fact remains—the farmer is in a position to build and on a new and stupendous scale.

For years past the rural population has been decreasing and the city population increasing more and more. We must not too rashly assume that the farmer is top-dog because he has a huge customer in the city population. That city population must be rich also, else it could not buy from the farmer.* But the farmer has found himself; he has wealth, and that is important and enough for you. If you can also contemplate that the home-builder of the great city population also has wealth, why, all the better.

Modern Force of Advertising

But even when prices become lower the farmer is going to prosper and progress. Rural delivery is making him a reader, and therefore a student of economic conditions. The higher education of his children is bringing intelligence to bear upon his business methods. Some of the latest developments in farming show that co-operation is working wonders for the farmers, and they are adding to this co-operation the modern force of advertising. Witness, for instance, the orange and lemon growers of California, who market their product under a trade name, and use extensive advertising. Witness, the last few years, the apple growers of the Pacific Northwest, who, by co-operative efforts, are successfully marketing their apples through national advertising.

There is no doubt that to-day the farmer furnishes new food for thought in the marketing of Western white pine lumber. And what is the fact about the farmer of to-day? What is the first thing he does when he has a little surplus to spend? Does he not improve his home and his buildings? Every month the farmer's wife receives the Ladies' Home Journal or Mother's Magazine, or such like. and in that magazine are pictures and dscriptions of attractive homes. She wants one; she means to have one; she is dissatisfied with the tumble-down lean-to, the floor that gives, and the pots and pans hanging on the wall. Instead of this she wants attractive glass-covered pantries. She rebels and gets what she wants, and buys what she sees advertised. It is up to you to tell her what your product will make for her.

And Mr. Farmer: Doesn't he read every week his trade paper, the farm magazines? Doesn't he read the interesting articles about modern barns and conveniences, and doesn't he, if he has any money, do what you do—try to improve his factory and his plant? Hence the modern barns, milk houses, etc., that are springing up all over the country. Think of the untouched market you have in the development of the implement shed. The power of suggestion is so strong that if you Western white pine gentlemen begin to feature these structures of Western white pine in your territory you will get a lead on this business that will be difficult to overtake.

Now, you lumbermen of the West have been credited with great courage. It is said of you that you have gone into the mountains and the wilderness and have overcome physical obstacles in getting your product out to the consumer, but did you ever consider that it requires

*A paper by a prominent advertising man read before the Western Pine Manufacturers' Assoc'n

a far greater courage to meet competition and beat it than to go into the woods and drag out your lumber and handle lumberjacks?

Don't you think it required courage for the substitute roofing men to go against the wooden shingle, or the wallboard people to go against lath. Not only did it require courage, but it required imagination, which is one thing that only too many business men—some lumbermen included—lack. You lumbermen are the upper dogs; have been for years. It is the substitutes that are barking up your tree and are showing the courage of business conviction.

It would do some of you gentlemen good to spend a week with, say, a manufacturer of biscuits. Can you imagine the feelings of such a man who, after years of struggle, is confronted with his salesmen's reports showing that the big trust back East is flooding his market with demonstrators and making introductory offers and special deals that are taking thousands of dollars from his pockets and are compelling him to fight or quit? Such a man, if he has not established his good-will by judicious advertising, is in a bad plight.

"There are none so blind as those who will not see," but it is a fact that the advertising of safety razors has made the American the young-looking man. Advertising raised an army for Great Britain in the time of her greatest distress. Advertising has made the orange and lemon growers of California prosperous. Advertising has sold automobiles, and, according to Bradstreet's and Dun, non-advertising is directly responsible for 80 per cent. of the business failures.

Individually you cannot advertise to any appreciable extent or effect, but co-operatively you can advertise and sell your entire market for a minimum outlay.

You, gentlemen, like the orange growers and the apple growers; like the asphalt producer, and the cement maker, can advertise co-operatively, and thus by assessing yourselves a trifle create and establish a good-will that is without doubt the best investment you can possibly make. You are good manufacturers. Are you good salesmen? Why not be both? But don't advertise in the spirit of, "Well, I'm a good fellow; here goes." But, on the contrary, advertise knowing that it is sound, positively necessary business to do so.

A Word About the Trade Mark

Now, just a word about the trade mark. A trade mark is an essential of advertising because it represents a responsibility that the buyer can look up to. Now. if the responsibility for Western white pine is invested in the association safeguards for quality, goodness of manufacture and inspection, then these guarantees should be incorporated in your advertising and the trade mark used is an identification mark for this certain quality or specification.

When you do adopt a trade mark, don't exaggerate it. Remember always that it is attractive homes, practical barns, silos to keep ensilage sweet, built of Western white pine, fine finish and other mill lumber that you want to sell. Advertise first what your lumber will provide for these. That will gain your market's interest. Next tell them that lumber assures them certain definite qualities and that these qualities are identified by a trade mark.

A few words, too, should be said about your product. Western white pine lumber is a splendid wood. It possesses every qualification essential to a general building material to a very marked degree. Because it is soft and easily worked it is a splendid wood for factory and shop use. It is wood that takes paint beautifully, and therefore for interior paneling, cupboards, doors, etc., it is excellent material.

The present time is most auspicious for advertising Western white pine, and particularly if you are going to concentrate on the farm and the factory trade. It is not disadvantageous to begin at a time of least resistance. The prosperity of the country and the excellent condition of the building industry are interesting factors. To come out boldly in an advertising campaign will forever offset, too, the misinformation circulated that pine lumber is exhausted.

Another thing in you favor is that pine is backed by "grandfather's good-will." Everywhere you have a host of acquaintances who are doing the same things as their fathers and grandfathers did before them—namely, building of pine.

New building construction is going forth very rapidly indeed. Many of the dwellings now in existence will need improving, changing, and rebuilding in the near future. Much of this is within your territory. You will win if you have the courage and the conviction, and advertise for the consumer's good-will.

When is your lumber sold? Gentlemen, your lumber is sold when the attractive home is built; when the door is hung on its hinges; when the pantry has won the woman's heart; when the farmer points with pride to his barns; when the traffic runs over the silent pavement. In other words, your lumber is sold when you intelligently, persistently advertise your product to the ultimate consumer.

The keel of the first wooden steamer to be commenced at St. John, N.B., for the Imperial Munitions Board, was laid recently at the yards of Grant & Horne, at Courtenay Bay.

A New Issue of the Hardwood Consumers' Register

The National Hardwowod Lumber Association has issued Volume No. 6, second section, 1917 edition of their Consumers' Register. This volume is larger than any previous issue, and covers a much wider range of territory.

When Volume No. 5 of the Register was published at the beginning of the present year the announcement was made that the second section would appear in the fall, but owing to the unexpectedly heavy volume of requirements that have since been registered by the hardwood consuming trade, it was decided to get out Volume No. 6 at this time. Furthermore, it is possible that it will be found advisable to publish a third section of the 1917 edition before the end of the year, that depending entirely upon what trade conditions may obtain or develop in the meantime.

It will be noticed in the present volume that in addition to the manufacturers of furniture, agricultural implements. railway equipment, etc., who have all along co-operated so liberally in this work, there is a notable acquisition in the shape of the automobile manufacturers, and that a substantial percentage of the leading units of that industry have now been included.

Lumber Prices Comparatively Low

A tabulation of the prices of 96 leading commodities on August 1, 1914, July 1, 1916, and July 1, 1917, is given by R. W. Babson, the United States statistical specialist. The items covered include agricultural products, chemicals, building materials, iron and steel, petroleum products, etc. Mr. Babson's figures show that these 96 commodities have advanced an average of 55 per cent. in price since July 1, 1916, and 127 per cent. since August 1, 1914. In view of the fact that the lumbermen have generally claimed that their product has advanced less in price than many other commodities, and still remains one of the most easily obtainable, readily worked, and reasonably-priced materials, the following figures, taken from Mr. Babson's report, are of special interest:

	Advance in price Since July 1, 1916. Percent.	Advance in price Since Aug. 1, 1916. Percent.
Brick	26	80
Cement	27	34
Lime	8	102
Nails	60	158
Steel	123	390
Lumber	23	28
Average of 96 commodities	55	127

Aeroplane Spruce Specifications

John H. Wall, of the purchasing department of the Curtis Aeroplane Company, of Buffalo, N.Y., explains the wood requirements of the company, and of many other companies for which it purchases, as follows:

Spruce, which makes up the largest part of the airplane, must be 2 in. and thicker, 4 in. and wider, and we try if possible to get four side clear stock; but this is an impossibility in any large quantity. so we buy "G" list and, when possible, four sides clear. We buy this stock 8 ft. and longer, with a large percentage 18 ft. to 40 ft. long. This stock must also be vertical grained.

We use tough, straight grained, white ash, 6/4 and thicker, preferably 6/4, 12 ft. 4 in. to 16 ft. long.

We also use pine for the webs, and we buy the clear grade 6/4 and thicker. All of this stock is resawed into 1.2 in. D2S.

For our propellers we are using straight-grained mahogany, which must be 1 in. and thicker, 10 in. and wider, 9 ft. and longer, but there is some talk of changing the specifications on the propellers to either quartered oak or birch, due to the scarcity of mahogany suitable for this purpose.

Co-operative Lumber Advertising

Advertising in a co-operative manner is being actively carried on by the California Redwood Association, which has started the development of a "builders' library" of publications to show the advantages of redwood for various types of buildings. Among the first of the publications, which are all being illustrated with actual buildings of the types described, is one on the redwood homes. The redwoods were many of them sturdy saplings at the time of the birth of Christ, and grow nowhere else than on the Pacific California coast. They are said by scientists to be a relic of the prehistoric vegetation which flourished with the mammoths and the five-toed horses. Another volume is on specialty uses. such as refrigerator insulation, coffins, incubators, pipe organs, and the like. Another volume is on finishes of redwood, and still another on the use of redwood on the farm.

Laying Out a Retail Lumber Shed

Practical Arrangement of a New Firm's Plant so as to Facilitate Shipment and Storage of Stocks

The layout of a retail lumber company's shed is always a matter of interest to other lumbermen. At a glance an experienced dealer can get a good idea of a firm's business as he passes through its shed. A good layout, affording satisfactory storage and shipping facilities, is greatly to be desired by any retailer, and for this reason we reproduce an illustration of a model shed for housing a large stock. The shed in question is located in a United States town, where competition is keen and where modern methods have much to do with successful trade. The illustration and descriptions are reproduced from the American Lumberman.

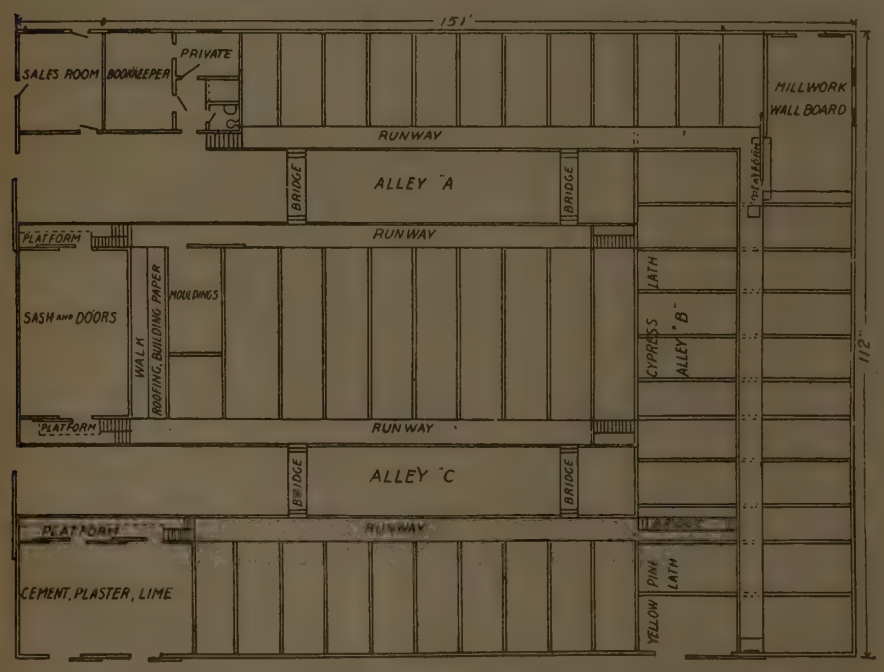
This new shed is a revelation in its completeness and ideal arrangement for the purpose for which it was intended. It is practical, and was designed and built for service without making the cost prohibitive or sacrificing appearances. It has been the intention to incorporate into this new plant all the good things observed in inspection and study of other sheds, and to add to these many of the owner's own useful and beneficial ideas.

The building is of wood construction. The outside measurements are 112 x 152 ft. The outside walls are 14 ft. high, and are covered with fir drop siding. The roof consists of yellow pine shiplap sheeting, covered with rubber roofing. Some idea of the size of this roof may be gained from the fact that it took 186 squares of roofing to cover it. The shed faces the street on the north; there are also a street on the east and a public alley on the west. The office is 18 x 28 feet, and is located in the northeast corner of the building; this is a large, airy room, with two large plate glass show windows and sufficient small windows for light and ventilation. Back of the office is a room 18 x 18 ft., designed as the service room, which will be fitted up with tables and chairs, samples of all kinds of merchandise sold by the firm, literature and advertsing matter, models, etc., and it will also answer the purpose of a rest room for the customers. The office and service room are finished with wall board, and this material shows to advantage for this purpose. There is a 7 ft. basement under the office and service room, and this will contain the heating plant, fuel room, storage and toilet.

The outside foundation is constructed of 8 in. building blocks on a 20 in. concrete base. The inside piers, which are 8 ft. apart each way, are constructed by placing 8 in. drain tile on 20 in. concrete bases and filling them with concrete, leaving the drain tile in place. This makes an excellent pier, and it is a big saving in form material and labor. Light and ventilation are secured from two rows of large windows in an offset in the roof and by ventilators in the outside walls just above the foundation.

The lot on which the shed stands varied from 1 to 5 ft. below the street level, and the soil secured from the basement was used for making the necessary fill and at the same time reduced the cost of this work.

The shed frame and all lumber supports are of 2 x 4 in. built-up construction, and the lower joist and all bearings are 2 x 6 in. built-up construction. The lumber bins are 8 ft. centres and the lower bins are 7 ft. high. The lumber bins back of the office are 17 ft. deep, as also are the bins in the rear of the shed. The bins on the west side are 21 ft. deep and the centre bins are 31 ft. deep. The driveway running entirely around the shed is 23 ft. wide. It is possible to load any of the contents of the shed by making one circuit of the driveway.



A model retail shed layout.

The receiving room for storing special stock is located in the east rear of the shed, and is 17 x 32 ft. This room has a door leading from the street on the east of the shed. The sash and door room, located between the driveways in the front of the shed, is 21 x 31 ft.; the ceiling of this room is 8½ ft. high, allowing plenty of space for handling doors without striking the ceiling. This room has two large windows opening into the street for light, and it is located on the north side of the building in order that its contents will not become damaged by reason of sun stain, which would be the case with any other exposure. The space above the sash and door room is floored, dust-proof, and is used for the storage of light material, such as screen doors, columns, glass, etc. The cement and plaster room is located in the west front of the shed, and is 21 x 32 ft. in size. This room is reached through doors from the inside driveways and also from the alley, making it possible to load and unload material from both sides. The space above the cement and plaster room is used for the storage of ladders, gutter, etc. Trap doors in the inside loading platform make this a handy and convenient place for the storage of empty sacks until they can be bundled. Back of the sash and door room in the centre of the shed and on a range with the manager's desk in the front office is an open passageway, which is used for the storage of ready roofing. This not only makes a convenient place for the roofing where it can be easily reached from either driveway, but it also gives the manager a commanding view of the opposite driveway without leaving his desk. The new shed has water connections in each driveway.

The upper loading platforms are 4 ft. wide. At present these are not protected by hand-rails; however, they have a 2 in. piece on the outer edge raised slightly above the level of the floor, which does away with the danger of the foot slipping. The objection to hand-rails is that they make the free handling of lumber impossible, which is not the case with the present arrangement. The upper decks are connected with foot-bridges, two in each driveway. These are raised to the proper height, so as not to interfere with free passageway underneath.

Opening into the alley in the west rear of the shed is a driveway, which can be used when needed to do away with crowding in the driveways. The floors in all warehouses are raised to the level of the floors of the wagon boxes or platform of the lumber trucks for convenience in loading and unloading material. The shed contains dust-proof bins enclosed with roller doors, for the storage of all finished stock, oak flooring, etc. Lath are piled in the driveway at the rear of the centre lumber bins and also in the driveway leading to the alley in the west rear. The mouldings are stored in dust-proof compartments and are laid flat.

This shed is so arranged as to take care of all the material carried by this firm, with the exception of the shingles and sewer pipe. To care for these items a storage yard 34 x 112 feet has been provided just across the street in front of the yard. This storage yard is in plain view of the office, and for this reason its location is ideal, and has many advantages over a yard located at the side or in the rear of the shed, as is so often the case. The problem of paving the driveways of this shed has as yet not been solved. The owner contemplates a paving of crushed rock covered with screenings. The one serious objection to the closed shed has always been the question of dust; and for this reason the treatment of the driveways of this new shed, with a view of eradicating the dust nuisance, will be watched with great interest by lumbermen.

Retail Yard Cost Comparisons

The cost of doing business in retail lumber yards, stated as percentages of the sales in these yards for the year 1916, is stated by the A. W. Shaw Company, of Chicago, to be as follows:

Indicated Costs of Doing Business Among Retail Lumber Yards (1916)

	Population of city or town.			
Items.	Under 5,000. Per cent.	5,000-50,000. Per cent.	50,000-100,000. Per cent.	Over 100,000. Per cent.
Salaries	5.20	4.37	4.00	4.94
Rent	.79	1.49	1.58	1.21
Handling stock	4.53	5.42	6.27	7.02
Advertising	.38	.34	1.05	.31
Heat and light	.10	.13	.27	.08
Supplies	.25	.29	1.10	.72
General expenses	1.22	1.37	.86	1.50
Insurance and taxes	.81	.92	.85	.91
Bad debts	.50	.74	.77	.75
Total costs	13.78	15.07	16.75	17.44

Farmer's Buying Power Strong To-day

That lumber is not high and that the same number of cattle, or hogs, or the same amount of wheat or other grain, will purchase much more lumber than it would in 1914, is a fact that the management of the Thompson Yards, Inc., with headquarters in Minneapoplis, is endeavoring to impress upon the managers of its several hundred yards in various parts of the country. In other words, this company wants its retail yard managers to remove from the minds of farmers and other prospective lumber purchasers, the impression that on account of the high price of lumber, building should be postponed. With this in view the company has just sent out to its various retail yard managers some convincing literature, and copies of advertisements.

The general instructions are as follows:

The statistics given are the average prices that were paid for the products mentioned during the years of 1914 and 1917. They were taken from official records on file in Minneapolis and are as accurate as we can average them.

The figures used in making up the comparisons are as follows: The average price of grain in 1914 was:

No. 1 Northern Wheat	$0.95 to $1.05
Barley	.40 to .50
Flax	1.30 to 1.50
Corn	.58 to .68
Hogs	6.75 to 7.25
Oats	.32 to .38
Rye	.72 to .78

In 1914 our cash price on lumber was as follows:

Shiplap, boards and dimensions, on 40c rate, per M.	$22.50
Shingles, per M.	3.15

The average price of grain in 1917 (first six months) was:

No. 1 Northern Wheat	$2.70 to $2.90
Barley	1.28 to 1.38
Flax	3.10 to 3.50
Corn	1.55 to 1.65
Hogs	14.74 to 15.25
Oats	.62 to .66
Rye	2.30 to 2.50

In 1917 our cash price on lumber No. 2 quality classification was:

Shiplap, boards and dimension on 40c fir rate, per M.	$34.50
Shingles, per M.	4.35

All local managers should familiarize themselves with the statistics shown. A few facts of this kind will boost your sales. There is a mistaken impression that lumber is "high." These figures prove that it isn't high. The farmer never will find a better time to build than now. There probably will never be another time in history when his products will buy so much lumber as they will right now. His purchasing power is represented by what he produces. What was $1.00 to him in 1914 is now $2.00 or $2.50. The same products purchase from two to two and one-half times as much now as they did then. "Dollar wheat" was a godsend! What of $2.50 wheat?

If lumber had advanced in proportion to the advance in farm products, Mr. Farmer would be paying from $55 to $70 per M. for common and could afford it. As it is, lumber is now only about $4 over list, and list represents the average normal value of lumber. In other words, lumber is really only about 15 per cent. above normal at the present time.

And so we say that the manager who imagines for a single, solitary moment that "lumber is high" and that it isn't a good time for Mr. Farmer to build must revise his opinion at once, when he knows the facts in the case as they really exist.

If you have any good farmer friends to whom you are anxious to "tip off something good," get them to build now! They will thank you many times in the future.

Story of a Long Headed Farmer and a Boneheaded Lumberman

By D. J. McManis

Once upon a time Farmer Bean took a notion into his cocoanut to build a barn. Now, this is an event that on the average occurs on the farm about once in twenty-five years. This farmer, being of a retiring disposition when it came to blowing his wad, reasoned thus:

"I'll have Plank & Co. figure this bill, then I'll take it over to Jimtown to Blink & Cut, then I'll have their competitor, Mr. Slash, figure on it. and I think by that time the bill will be cut down to where they won't make much off of this duck."

So first he had Plank & Co. name their figures. Now, that firm believed in having a reasonable profit, so they figured the bill regular, and it amounted to $380. Over to Jimtown he goes to Blink & Cut. Those gentlemen, knowing the bill had already been figured, felt they would have to keep up their good name and reputation by making a cut, so they placed their estimate at $362. "So much so good," said Farmer Bean. "I'll go over and see Lumberman Slash." Now. Slash always had his nerve with him when it came to figuring down, but never when it came to figuring up; so he cut the bill down to $340, with an additional 2 per cent. off for cash.

So in process of time Father Bean hauled his lumber out of Slash's yard, and, with great glee at his success in cutting down profits, built his barn.

Now, it came to pass subsequently that Lumberman Slash wanted to buy 500 bushels of corn, so he said within himself: "I'll just go up and see Farmer Bean, and I think I'll get back some of that profit I gave him on the barn bill. So he went up to Bean's, who had about 5,000 bushels of corn in his cribs..

"Good morning. Mr. Bean," said Lumberman Slash. "I want to buy 500 bushels of corn from you. I suppose you will shade the price a little; you know I let you have my profits on that lumber I sold you for the barn."

"Shade the price!" exclaimed Bean. "Not by a dang sight. The price now is 95 cents a bushel and chances are good for another raise. I'll let you have the 500 bushels for $500 cash."

"Won't you give me, please just give me, anyhow, 2 per cent. off for cash?" whined Slash.

"Not on your life!" yelled Bean. "I'm not going to give away my good profits."

"But I gave you my profits on the lumber I sold you," whined Slash.

"Young man," yelled Bean, "I want you to understand that your profits and my profits are two different things."

That night Lumberman Slash had a dream, and dreamed that his head had all turned to bone, and that everybody was pointing fingers at him and calling him "Bonehead! Bonehead." The next morning Slash hung the following sign up in his office:

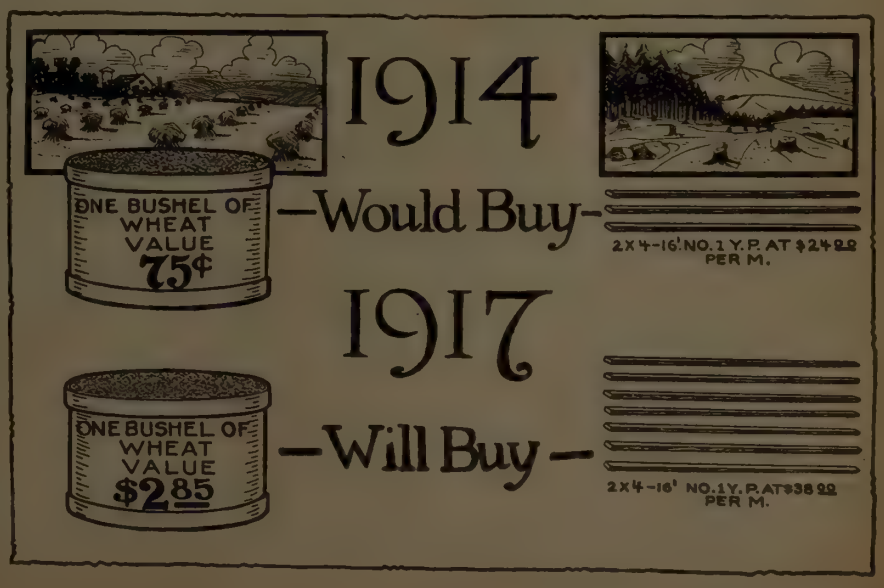
"The next man that gets me to cut below a legitimate profit on a bill of lumber will have the privilege of kicking me out of my own office."

Munitions Production in Canada to be Reduced

An Ottawa despatch of an evidently official nature states that the British Minister of Munitions has announced that munition production in Canada is to be reduced. The statement says that it is now unnecessary to continue production in Canada on the present scale, and that certain lines will be discontinued; other lines will be produced in lessened quantities, and some lines will be continued as at present.

The Farmer's Purchasing Power

A striking illustration of the fact that the farmer to-day is in a better position than ever before to spend money upon lumber for the erection of barns, silos, etc., is afforded by the accompanying illustration, which is reproduced from the Retail Lumberman. This is a Southern States publication, and its comparisons relate to the purchasing power of wheat as expressed in yellow pine boards. Comparatively speaking, the situation is practically similar in connection with Canadian lumber products. In 1914, with No. 1 yellow pine dismension selling at $24. which was the average retail price at that time, one bushel of wheat at 75 cents—the price at which wheat sold in August of that year—would buy three pieces 2 x 4/16. This fall, notwithstanding the fact that the average retail price of No. 1 yellow pine dimension in the country yards in the Kansas City territory has advanced to $38, one bushel of wheat at $2.85—the price it sold for the day this was written—will buy seven pieces of 2 x 4/16.



Ontario's Waste in Pulp Logging

By R. O. Sweezey

How long should a pulpwood log be? Naturally, the answer is that theoretically it should be of a length that will enable the operators to get as much as possible out of each tree. But there are other considerations which seem to prevent theory from squaring with practice. For instance, Quebec operators prefer 9 ft. to 12 ft. lengths, while Ontario operators cut 16 ft. logs. The reasons for this are discussed in the following article, the writer of which has had long experience in the business. Perhaps some of our readers can make a few good suggestions on this important question.—Editor.

Isn't it strange that those lumber and pulp companies which make most fuss about cutting stumps flush with the ground, using the saw instead of the axe for felling, rigidly adhere to their rule of cutting logs 16 ft. long? Herein may be found a waste much greater than in leaving a stump of convenient height in felling. The labor results of cutting trees flush with the ground, with two men operating the saw, fall considerably short of those from two men operating independently with the axe. It is a question of the saw versus the axe. The height of the stump, however, makes little difference. except that frequently the butt end of the tree is found to be rotten when cutting so near the ground.

The point to observe about the 16 ft. logs is that spruce will cut one to four logs per tree. In black spruce we usually get two or three logs in the mature trees, and where two logs are cut, probably over 50 per cent. of such trees would yield an additional 8 to 12 ft. down to 4 in. top; but, as the operating company wants only 16 ft. logs, the lumberjack has no choice but to leave the top to rot in the woods. The difficulty lies in the fact that the logs are too long. Multiples of 12 ft., say, would give three logs, equal to 36 ft., where only two 16 ft. logs can be cut. It is obvious that both in theory and practice the shorter the log the more complete will be the utilization of the tree.

The suggestion arises to cut both 16 ft. lengths and shorter lengths, say, 8 ft., for the tops. But this practice of having two standard lengths involves much inconvenience and added cost in making and skidding separately. For shanty operations logs should preferably all be of the same standard length, and that length is made to conform to the arrangement of saws at the slasher mill as well as being governed by the multiples of length required by grinders.

The 16 ft. logs find favor with the Ontario pulpwood cutters because it is of a convenient length for "snaking" and not too long for driving. It is also a good length for team loading. If the log were shorter the "snaking" operations would probably be slower for a given quantity, besides more saw cuts are necessary in cutting shorter logs. Therefore, in theory, the longer the log apparently the more efficient should the operations be. Owing to team loading and driving, however, there is necessarily a well-defined limit. and that limit is found to be about 16 ft.

Now, in the Province of Quebec (which boasts the best log-makers in the world), where streams are so plentiful that long hauling is rare, logging is done mostly by the single-horse method. One immediate result is that roads cost much less, and with small horses the jobber gets into corners where pulp logging by the Ontario system would be very costly. By reason of this single-horse system and narrow roads (aptly described by an Ontario operator as "cow-paths"), the jobber, equipped with his home-made sleighs of peculiar design, can and does make more logs and greater quantity in a given time than the Ontario log-maker. But he prefers the shorter logs; 9 to 12 ft. suit him best, because one man alone can handle these better than he can the 16 ft. logs, for which, if he must make them, he demands 50 cents a cord more. Thus the extra cutting necessary in logging the shorter lengths is more than offset in the handling. The question, then, is why should not all Ontario pulpwood operators adopt the shorter lengths and save the waste now occurring in tree-tops?

Few Fires in Northern Ontario

It is now a little over a year ago since the great forest fires occurred in New Ontario which destroyed great areas of timber and resulted in the loss of many lives. This year, according to reports received from the chief ranger of the Department of Lands, Forests, and Mines of the Province of Ontario, there have been no serious fires. This has been due to the improved forest protection arrangements and to an abundance of rainfall. Northern Ontario settlers have now finished taking in their harvest and are starting to cut more pulp than ever. Owing to the high prices obtained for wood, it is expected that the returns will be the highest on record.

The Logging Outlook in Canada

That the labor shortage and the high cost of equipment and supplies are likely to prove a serious handicap to logging operations now commencing, or being planned, is reported from all parts of Canada. Many letters to this effect are being received, and loggers are discussing the situation everywhere. the general belief being that the difficulties constitute almost a crisis. The matter does not permit of much discussion, being simply a recognized state of affairs, growing out of enlistments and the high wages obtainable in other industries. As an indication of the way in which logging operators look upon the situation in different parts of Canada we pubilsh three letters upon the subject, received from Quebec, Ontario, and British Columbia:

Labor Scarce in the Ottawa Valley

Editor Canada Lumberman:— Pembroke, Ont.

There is only one statement which it is possible to make at the present time regarding the industrial situation in connection with the lumber business. Labor is very scarce and all equipment and provisions are advancing in price every day. We think that the majority of lumbermen in this district will be taking out a normal cut during the coming winter, and the ultimate result will be a much increased cost, and consequently a necessity for much higher prices next spring when the output is for sale. All these conditions, of course, depend more or less upon the lumber market. It is not at all certain at present that sufficient labor will be available to take out a normal cut.—Pembroke Lumber Co., per A. L. Eastcott.

* * *

Quebec Logging Camps Short of Men

Editor Canada Lumberman:— East Angus, P.Q.

We are finding it very difficult to secure contractors for taking out the stocks of logs that will be necessary for the coming year. This is on account of the shortage of labor, and the high cost of provisions and equipment of all kinds. We expect to see the output of both labor and pulpwood materially reduced next year. Only a very limited quantity of pulpwood has been peeled in the woods this year, and, as a result, a large number of mills will put their logs into pulpwood instead of into sawn lumber. In the near future we anticipate very much higher prices.—Brompton Pulp & Paper Company, Limited, per J. A. Bothwell, Manager.

* * *

B. C. Camps Suffering from Labor Shortage

Editor Canada Lumberman:— Vancouver, B.C.

The chief feature in the industrial situation in British Columbia today is the unrest among laboring men. Strikes seem to be quite the order of the day, with the result that many of the shingle mills are closed down at present and the majority of those that are running are only operating to part of their capacity. There is a great scarcity of labor in the logging camps also, and many of these are only able to operate to part of their capacity. Men who will work are demanding very high wages. The high cost of labor, equipment and provisions is increasing greatly the cost of production, as compared with previous years. A change in the mental attitude of laboring men is very badly needed, for with so many men at the front and so many others engaged in the production of munitions, building of ships, etc., and much other labor in industries directly growing out of the war, every man should be willing to do his utmost to produce as much as possible and thus help the nation win the war. As conditions are at present, however, production will be greatly curtailed here this year in almost every line and the cost of what is produced will be very much higher than it should be.—Robert McNair Shingle Company.

The High Cost of Woods Labor

Those who are not closely in touch with the problems of the logging camp labor situation cannot form any idea of what operators have been going through lately. Every day has brought its wage increases and its increasing labor scarcity, until it has seemed almost impossible to go on any more. A letter written by one Pacific Coast lumber manufacturer to another, and given to the American Lumberman for publication, tells the story vividly.

"The matter of labor efficiency," the writer says, "is about the same with you as with us. One of the lumbermen here told me last week that his payroll this year for men at his mill, producing the same amount of lumber as last year, was just double what it was last year, due to the increased wages and the need of more men to do the same amount of work.

"We personally have advanced our wages twice this season on most of our men, and we thought that when we started up after the holiday we would probably get away without any further increases, but the logging manager has been up here for a couple of days looking after some men and talking with a good many of the old men on the river. He personally knows a large share of the loggers and has talked with a good many of them. He says that we have got to figure on an increase of from 25 cents to 50 cents a day all the way down the line when we start up to-day.

"We have already had some shots at it. Our locomotive engineer hit us for a raise from $4 to $4.75, which we gave him. Our head rigging man, who is a good man and one we want to keep, came in and said that he was offered $5. We were paying him $4.25. He preferred to go back to work for us, and we met the raise—paid him what he asked. There are other cases of the same nature. Hook-tenders are getting from $6 to $8. We have been paying our hook-tender $6.75. He will be in again and will probably want more money, especially when he knows that our head rigger gets $5. Seven dollars is good hook-tender wages and is about as much as most of them are paying, although the logging manager said that two of the hook-tenders he knew had been hired to go out at $8 per day.

"In addition to the increased wages we face a shortage. There were none too many men as it was, but they are in here for men for Southern Oregon, Eastern Oregon, Eastern Washington, and Idaho, and even California. We can't get much chance to 'pick.' You don't pick; you take—when you can. One thing that may help us is the fact that lots of the old-timers who have gone out of the country may come back in here when they hear the wages that are in force."

Maine Woodsmen Are Highly Paid

Munition factories are not the only places where big money is earned. In the State of Maine, for instance, first-class woodsmen who can cut two or more cords of pulpwood a day are receiving from $5 to $10 a day cutting by the cord for a big paper company, the Great Northern, which has put most of its pulpwood cutting on the piecework basis. Any first-class woodsman can cut two cords of pulpwood a day without exerting himself, and by exerting himself he can cut three or four; and this means $7.50 to $10 a day.

Wages in the woods this winter will be higher than ever before, ranging from $1.40 a day for main road swampers to $2.55 a day for A No. 1 cooks. This means that the lowest wage in the woods will be $36.40 a month and board, and the highest for men who are not bosses will be $72.50. Never in the history of the Maine woods have such wages been paid. Men of no great industry or ability can get jobs in the woods at the lower wages, as long as they are able to do anything at all.

The high wages paid to men cutting pulpwood has not been an unmixed blessing. The more pay woodsmen get, as a general rule, the less time they care to spend in the woods. It does not take a man earning $5 a day long to pile up $100 to his credit, and as soon as a man has that amount coming to him he begins to stir uneasily and loses ambition. Then comes a trip to Bangor or Boston to enjoy life for a brief time, spending his money, and back to the woods again.

The men who are paid by the cord for cutting pulpwood pay the company for their board, at 75 cents a day, but otherwise their working conditions are the same as if they were employed by the month. They have comfortable camp accommodations and plenty of the best food.

Prohibition and the Logger

Only a few short months ago the city rendezvous of the average logger in the Pacific Northwest was a short pace indeed from the corner saloon below the "line" in Portland or Seattle. A 25-cent room or even a 10-cent bed in vermin-infested lodging-house served him well enough in the days gone by. His accumulated pay checks, often untouched from Christmas to the Fourth of July, melted at the bar like the proverbial dew before the rising sun. Ten days to two weeks were often ample to reduce his roll to the last farthing.

The logger was easily "rolled" or "trimmed" out of the last remnant of his once tidy little sum by the leeches of the lower levels of society, were any left after John Barleycorn finished with him. A few days of such revelry usually sufficed to send him back to his camp with a bad taste in his mouth and a feeling of disgust.

With prohibition has come a new order of things. This year, on the second "dry" Fourth of July, we have observed the logger in the better class hotels up town, enjoying a room with a bath. He now dresses as well as his superintendent.

As for the prohibition question, we see nothing more to argue about.—The Timberman.

High Wages in the Lumber Camp

The quantity of logs scaled in British Columbia during the month of June was 128,285,354 feet, making the total for the half year 576,369,000 feet, as compared with 416,387,000 feet during the corresponding six months of 1916. Wages for woodsmen in British Columbia are very high, and the labor shortage is acute. Hook-tenders receive $5 to $6 per day and board; rigging-slingers, chokermen, and chasers get from $4 to $5; fallers get from $4 to $6, and skidroad men from $3.50 to $4.25 and are very scarce at that.

Liverpool and Manchester Stocks

The following report upon Liverpool and Manchester stocks for the month ending July 31st, is furnished by H. W. Lightburne & Co., Liverpool, Eng.:—

Spruce and Birch

Month Ending July 31st, 1917

Liverpool

	Import			Consumption			Stock		
	1915	1916	1917	1915	1916	1917	1915	1916	1917
N.B. & N.S. Spruce & Pine, Stds. ...	9.550	4,760	580	2,330	2,870	1,060	12,430	9,880	3,440
Birch Logs, Loads	500	460	40	420	100	60	340	780	240
Birch Planks, Stds.	485	121	0	352	218	48	249	279	133

Manchester

Spruce, Stds.	7,390	7,960	270	4,510	3,020	980	13,230	13,980	5,110
Birch Logs, Loads	240	60	0	520	80	0	380	300	60
Birch Planks, Stds.	552	0	0	212	42	67	491	424	236

Stocks in Manchester and Liverpool Combined

Spruce

	1913	1914	1915	1916	1917	
Manchester	9,420	13,690	13,230	13,980	5,110	
Liverpool	9,190	8,040	12,430	9,880	3,440	
	18,610	21,730	25,660	23,860	8,550	Stds.
Birch Logs						
Manchester	520	980	380	300	60	
Liverpool	560	600	340	780	240	
	1,080	1,580	720	1,080	300	Loads.
Birch Planks						
Manchester	424	600	491	424	236	
Liverpool	800	436	249	279	133	
	1,224	1,036	740	703	369	Stds.

Tacoma Fir Door Plant Destroyed by Fire

Terry & Gordon, wholesale lumber dealers, Confederation Life Building, Toronto, report that the plant of the Tacoma Fir Door Company, Tacoma, Washington, was recently destroyed by fire, the loss amounting to $150,000, and the insurance being $102,500. Messrs. Terry & Gordon handled this company's doors in Eastern Canada, and while they will be inconvenienced to some extent by the interruption in their deliveries, they state that the company hope to have the plant rebuilt quickly. They intend to put up a new plant as soon as machinery can be secured.

A FITTING REPRESENTATIVE

Ludington, Michigan.

Editor Canada Lumberman:

I have just finished a careful perusal of the annual number of the Canada Lumberman. Whoever is responsible for this issue is certainly to be congratulated. From the British lion on the front cover to the clothing ad. on the back cover this is certainly a splendid number. To compile an edition like this, consisting of 182 pages and cover, with the advertising shown here, is certainly some task. I want to congratulate you on the appearance of this edition. and say that I believe it is a fitting representative of the splendid lumber industry of Canada.—A. M. Johnston, Publicity Manager, Stearns Salt and Lumber Company.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) $2.10 per inch, each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted—Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

For Sale—Lumber

For Sale—Lumber

200,000 ft. Cull 1 in. and 2 in. Hemlock.

S. L. PURDY,
Coehill, Ont.
17-18

For Sale

Can make prompt rail or boat delivery of from 3,000 to 5,000 pieces of Jack Pine Piling, from 40 ft. to 70 ft. long.

The New Ontario Timber & Trading Co.,
Sault Ste. Marie, Ont.
17-20

Lumber For Sale

300,000 ft. B.M. 1 x 4 and up Clear and No. 1 Spruce.

400,000 ft. B.M. 2 x 4 to 2 x 10 Spruce. Piled widths and lengths separate.

GEO. C. GOODFELLOW,
Montreal, Que.
c

Hardwood For Sale

About 60,000 pieces birch and maple in sizes 6 in. x 6 in. (five ft. and six ft. lengths). Immediate delivery, subject to prior sale.

J. R. Baxter & Company, Limited,
102 St. Antoine St.,
Montreal, Que.
17-17

For Sale

100,000 ft. 1 in. dry Cull Birch.
150,000 ft. 3 x 6, 6/16 ft. dry Sixth Quality Spruce.
200,000 ft. 1, 2 and 3 in. C. Cull White Pine.

FRED T. SMITH,
310 Board of Trade Bldg.,
Montreal, Que.
14-17

For Sale—Machinery

For Sale

Band saw-mill machinery in our Saw-mill at Lakefield, Ont. Two complete units. Shafting, pulleys, three boilers, etc. For particulars apply The Dickson Co., Ltd., Peterborough, Ont. 15-18

Machinery For Sale

A Light Planer, Matcher and Moulder.
12 in. 4-side Moulder.
Power Feed Rip Saw.
Trim Saw. 12 in. Jointer.
Dry Kiln. Lighting Plant.

A. J. LINDSAY,
94 Pembroke Street,
Toronto, Ont
17-20

For Sale
Logging Railroad Equipment

Five hundred tons relaying rails and fastenings, mostly 56 lb.

One Shay gear locomotive, 70 tons (coal, wood or oil burning).

One Shay geared locomotive, 40 tons.

Two steam log loaders (derricks).

One Raymond Gasoline Log Loader.

Forty flat cars, 60,000 lbs. capacity, with air brake equipment.

One Empire Logging Donkey Engine (from Vancouver). Unloads a half car of logs at one time. Very powerful.

And other material, all in first class condition. Located in Ontario. Delivery September to November, this year.

GEO. H. HOLT,
926 Manhattan Bldg.,
Chicago, Ill.
16-17

Wanted—Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

WANTED POSITION as woods foreman or licensed log scaler. Best of references. Box 1105, Welland, Ont. 16-17

EXPERIENCED BAND SAWYER, double or single, right or left, open for position at once. Box 618, Canada Lumberman, Toronto, Ont. 17-17

EXPERIENCED BOOKKEEPER and Lumber Office man open for immediate position. Good references. Box 617, Canada Lumberman, Toronto Ont. 17-17

POSITION WANTED as band saw filer by a man who is capable of handling saws in a large mill and has 18 years experience and is steady. Box 617, Canada Lumberman, Toronto, Ont. 17-17

A PRACTICAL LUMBERMAN, forty years old, with twenty years' experience, is open for engagement June 1, 1917. Last ten years with very large Canadian firm as superintendent and sales manager. Best of references. Box 496, Canada Lumberman, Toronto, Ont. 2-18

WANTED POSITION as Band Saw Filer or mill superintendent, having 25 years' experience on band saws and mill wright. Will go anywhere for yearly position. Can furnish gilt edge reference. Age 46. Can speak English and French fluently. Box 609, Canada Lumberman, Toronto, Ont. 15-18

WOULD LIKE TO HEAR from some saw mill owner who needs the service of a competent and reliable mill man who has had twelve years' experience in manufacturing in up-to-date mills; also would be willing to invest some capital with good people. Box 613, Canada Lumberman, Toronto, Ont. 17-20

Wanted—Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

WANTED MAN to take charge of Planing Mill. One who is capable of setting up machines, filing and grinding pattern knives. Address Drawer F., Sarnia, Ont. 13-t.f.

Business Chances

Sawmill For Sale

Complete Sawmill for sale, cheap and easy terms. Capacity 20,000 feet per day. Field Lumber Company, Limited, Field, Ont. 11-t.f.

Logging Contract

We are open to place contract with an experienced jobber to cut logs and wood during the coming fall and winter from a Lot in Belmont Township, Peterboro County. Full particulars on application to The Pearce Company, Limited, Marmora, Ont. 17-17

Saw Mill For Sale

Complete Sawmill with timber rights and freehold lands for sale, excellent shipping facilities. Mill situated County of Shefford, with a visible supply of soft wood and hardwood timber in the neighborhood for an extended life. Address P. O. Box 222, Waterloo, Quebec. 16-t.f.

For Sale

Section Land (500 Timbered), Store, Saw and Planing Mill equipped, Boarding House, Barn Stable, Poultry Houses. Price, if sold now, only $8,000. Sell Store or Mill separate, cheap. Address,

L. GARNETT,
1168 Queen S.,
Soo, Ont.
17-17

For Sale

Timber Limits and Sawmill, estimated fifteen million feet of hardwood and ten million feet soft woods. Sawmill capacity 25 M. feet, shingle mill 125 M. Docks, tug, booms, logging outfit, houses, etc. Price $35,000.

The Manitoulin Lumber Co., Ltd.,
Walkerville, Ont
11-22

Saw Mill For Sale

For quick sale, Saw Mill complete, capacity 20,000 feet per day. Or will sell parts separately. Also two Pulpwood Loaders complete with Upright Boilers and Engines, capacity 500 cords each daily. All machinery in excellent condition. For further particulars apply The James Horrigan Company, Limited, Port Arthur, Ont. 15-18

Jobbers Wanted

We wish to let several contracts to take out logs on Berth No. 6, being broken front lying between the Magnetawan and French Rivers. This berth is all convenient to Canadian Northern Railway.

John Harrison & Sons Company, Limited,
Saw and Planing Mills,
Owen Sound, Ont.
9-t.f.

FOR SALE

Kootenay District, B. C.

STANDING TIMBER

Cedar	24,500,000 ft.
Spruce	17,500,000 ft.
White pine	17,000,000 ft.
B. C. fir	1,100,000 ft.

Lies on Jordan River. For quick sale will accept $20,000 for this block. Annual rental only $400. Government dues 50c per M. when timber is removed. Above quantities guaranteed.

We have other larger blocks of choice Western timber to offer.

J. E. MURPHY,
26 and 28 Adelaide St. W.,
Toronto, Ont.
16-t.f.

Mill Plant and Limits For Sale

43 Miles Limits on 31 Mile Lake, Gatineau Valley, containing Basswood, Spruce, Fir, Pine, Cedar, Birch, Maple and Pulpwood.

New Waterous 8 ft. Improved Double Cut Band Mill complete. Steam Alligator, Boats, Sleighs, Wagons, Harness, etc. For further particulars apply to

A. W. STEVENSON,
P. O. Box 2024,
Montreal, Que.
8-t.f.

Car Supply Improved in U. S.

Reports just received by the Railroads' War Board of the United States show that the rail roads of the country in their co-operative efforts to give to the country the greatest possible amount of freight service, have effected an extraordinary improvement in the freight car supply.

These reports show that the excess of unfilled car requisitions over idle cars, or what is ordinarily but inaccurately termed car shortage, was only one-fourth as great on August 1, 1917, as on May 1, 1917. The excess of unfilled car requisitions on May 1 was 148,627, on June 1 it was 106,649, on July 1 it was 77,682, and on August 1 it had been reduced to 33,776. This result has been accomplished at a time when the railroads are supplying from 15 to 20 per cent. more freight service, with the same number of cars, than was being given this time last year, for the railroads handled in July a tremendous increase in both government and commercial traffic. The movement of cantonment supplies alone occupied the full services of more than 30,000 cars. There was also an extraordinarily heavy demand for cars to transport food products as well as materials to and from munition factories.

According to a recent statement in Parliament by Sir Edward Kemp, Minister of Militia, a total of 10,170 men has been recruited for the four Canadian forestry battalions now overseas. Recruiting is still going on and the total number now enlisted for forestry work is approximately 15,000.

PHILIP T. COOLIDGE
FORESTER
Technical training and ten years' experience. Timber Estimating and Mapping. Supervision of Lumbering Contracts. Surveying. Forest Planting.
Stetson Building, 31 Central Street
BANGOR, MAINE

Valuable Water Power

and

162 Square Miles

of

Valuable

Timber Limits

For Sale by Public Auction

The limits are on the river, Mississippi Branch, a tributary of the Madawaska, and Water Power at Eganville, Ont., on the Bonnechere River. These will be offered for sale by Chas. M. Henderson & Co., Auctioneers, at their office, 128 King St. East, Toronto, Ont., on **October 30th, 1917, at 2 o'clock p.m.** The limits will be offered in three parcels, as follows:

Parcel No. 1—
Comprising parts of the Townships of Mayo, Carlow, and Raglan, license covers in all 65 square miles, a great portion of which is deeded or located lands.

Parcel No. 2—
Comprising two parts of the Township of Cashel in two licenses, covering 18½ square miles, well timbered.

Parcel No. 3—
Comprising parts of the Township of Ashby and Effingham, in all 78½ square miles, well timbered. This parcel also includes lots 29 and 30, Con. 10, Mayo, making 100 acres (more or less), on which is located a valuable water power, known as the Big Chute, situated five miles from the terminal of the Bessemer & Barrys Bay Railway.

All this country was cut over some years ago for the pine, of which there is considerable left, along with large quantities of Birch, Maple, Ash, Elm, Hemlock, Cedar, Spruce, Balsam, and Basswood, suitable for sawlogs, also pulp wood, railway ties, and large quantities of hardwoods for chemical purposes and a great growth of young pine.

These limits are close to the Central Ontario Railway, on the West, a branch line of which runs in the Childs Iron Mine in the Township of Mayo, from L'Mable Station. They are also easily accessable from Barrys Bay, on the Grand Trunk Railway.

The Sale will be subject to all conditions and regulations of the Department of Lands, Forests & Mines, affecting same. The licenses permit the cutting of all kinds of timber, except on deeded or located land.

The reason for selling is for the purpose of closing up an Estate.

Terms of sale regarding limits, 25 per cent. of purchase money down, 25 per cent. 1st of July, 1918, balance 1st of July, 1919, bearing interest at 6 per cent. per annum. A liberal discount can be arranged for cash. Transfer of license will be made on final payment, purchaser bearing cost of transfer.

There will also be offered for sale a valuable Water Power, with a cement dam, and the stone walls of a flour mill; the latter was burned in 1911. This is in the centre of a thriving village served by the C. P. R. and G. T. R., a good manufacturing site.

Terms for the Water Power: 25 per cent. cash on day of sale, balance can be arranged.

Any further information regarding these properties will be furnished by writing the undersigned.

The properties are offered for sale subject to a reserve bid.

GEO. B. FURGUSON,
Renfrew, Ont.

August 30th, 1917.

Union Lumber Co.

Limited

White Pine
Red Pine
Spruce
Red and Jack Pine
Lath

Union Lumber Co., Limited

701 Dominion Bank Building
TORONTO, CANADA

Garlock Packings

Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.

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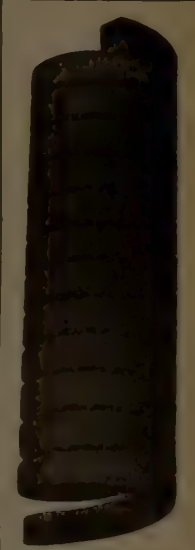
Style No. 150

The Garlock Packing Co.

Hamilton, Ontario

Branches:
Calgary
Montreal

Branches:
Toronto
Winnipeg

Review of Current Trade Conditions

Ontario

Market conditions in Ontario during the month of August are always quiet, and during the present year they have been rather difficult to analyze. The retail lumber trade seems to feel that lumber prices now have reached their highest point. Some wholesalers are inclined to agree with them in this regard and a few who have discussed the matter with the Canada Lumberman recently express the conviction that high prices have had much to do with discouraging building operations during the present year. On the other hand, although the demand is limited in many localities, the general consumption seems to be sufficient to absorb available stocks. The extreme scarcity of labor and the usual crop of sawmill fires have curtailed the output to some extent.

Logging operations have not yet commenced to any extent. Men for work in the woods are very scarce and producers are now anticipating that logs will cost them at least $5 a thousand feet more during the coming winter than during last winter. Some operators believe that the increased cost will run from $5 to $7.

The demand, on the average, would be considered fairly good for the month of August, notwithstanding the quietness in the building trade. Lumber is not going into building operations extensively, but there is a good demand for war and other purposes from the United States. Probably the greatest demand for Ontario stocks today is from that quarter, and is largely for war purposes, such as the construction of steel plants and general manufacturing. Dealers at Tonawanda, N.Y., are taking large stocks of Canadian lumber and shipping them to the Eastern States. Philadelphia is also using a lot of Canadian stock. Most of the lumber entering this trade is white pine and spruce, and includes all grades from dead culls to deals.

A shortage of shingles is not considered unlikely during the coming fall, and this is expected by some wholesalers to be accompanied by a further advance in prices. The volume of shingle production in British Columbia today is small, on account of the strike among workers, and at present there seems to be no assurance that the strike will be settled in the near future.

In connection with Ontario lumber stocks the chief thing of interest is the fact that there are practically no available stocks on the market. The mills sold their lumber early in the year, but did not expect at that time to run out of stock. Many of them figured that they would have a little on hand to sell at advanced prices if the market continued to improve. In this hope they have been disappointed on account of the lumber scarcity, and fully ninety per cent. of the mills to which this situation applies are finding it difficult to produce sufficient to keep up with what they have sold.

A slight car shortage is reported at some points now, but the real car shortage which is expected in the fall has not yet commenced. The movement of grain will probably cause the commencement of an extensive shortage of cars, as it has in former years. There is a slight shortage of C. P. R. flat cars, as many of them have been turned into coal flats by putting boxes on them.

Lumber prices at Ottawa continue firm. The shell box situation is rather uncertain. No new contracts are being let, and manufacturers who are completing old ones are in a quandary about their future business. Unless the Munitions Board makes some announcement of a reassuring nature soon the situation will be discouraging. It is possible that United States shell box production may either take a lot of Canadian stock or, not being sufficient to furnish all the United States Government requires, may result in some contracts coming to Canada.

Eastern Canada

Nothing has developed in the Montreal or Quebec Province trade during the past fortnight that can be considered of special interest. The local trade is still quiet. The building situation is inactive, and the yard trade, as is natural in August, has been almost featureless. Low-grade thick stocks are plentiful, as they have been moving slowly all summer. The threatening car shortage is inducing retailers to open up a little more, and a moderate amount of buying from this source seems to be probable in the near future. The announcement of the British Minister of Munitions that shell contracts will not be so plentiful in Canada in future is considered as likely to slow up business to some extent, as stocks of lumber for shell boxes have been one of the most important features on the market for many months. It is not possible, however, to foresee developments in this connection, and the situation will not be clear till it is known definitely to what extent the munitions contracts are to be reduced. Trade with the United States is on a fairly large scale, and there is a moderate demand at Montreal for stocks from outside points. The commencement of the logging season is at hand, and there is still much uncertainty about the extent to which they will be carried on next winter, but previous experience leads to a belief that, in spite of high operating costs, there will be as large an output as possible. The percentage of pulpwood to sawlogs, however, will unquestionably show a large increase over former years.

The Eastern spruce market at Boston is somewhat stronger than a fortnight ago. A more general feeling of confidence is reported among manufacturers, and if any changes have developed they are expected to be upward rather than downward. The government has placed more orders for spruce dimension, and most large mills are engaged in this business. The call for house frames is quiet, but only a small number of mills are in a position to handle this business. Stronger prices are expected and a decreased cut next season, on account of the advancing cost of labor and supplies. Moreover, there is a prospect of steadily increasing requirements for government work. There has been increased enquiry of late for Eastern white pine on account of delays in shipments of Western and Northern pine. Hemlock prices at Boston are still advancing. Offerings are very light, and it is expected that the output of the mills this season will show a reduction. There is fair enquiry for hemlock plank, and quotations are higher. The shingle market at Boston is rather quiet, and some price concessions are reported. Uncertainty in regard to future supplies of red cedar shingles is helping to maintain the price of white cedars. Lath also are quiet. Spruce lath have sagged a good deal from their early summer values. Manufacturers' stocks are not heavy. and a little more activity would probably make the price advance.

United States

The intention of the United States to establish a rigid policy of price regulation in regard to a great many essential articles of trade is causing a good deal of uncertainty at present, as to future trade. Disorganization of business resulting from the selection of the national army is also slowing up industrial activity. An added feature of disturbance is the spread of labor unrest throughout the country. These, however, are about all the adverse features that are to be reported at present. The crop prospects, on the other hand, continue to improve, and farmers are expecting to receive far more for their products than ever before. The lumber industry cannot fail to benefit from this situation, as the farmer is one of its greatest customers.

The building situation continues to show that the entry of the country into the war has had an adverse effect in this line. The loss in permits during the month of July amounted to about seventeen per cent., not including New York City. For the entire country a loss of fifty per cent. is reported. In spite of this, however, the quantity of lumber being shipped and sold is far greater than normal at this time of year, and it is going to factories of a great many kinds. So far as the lumber industry is concerned the greatest trouble it has to face today is that of labor unrest arising out of the demand for an eight-hour day in the sawmills. The situation on the Pacific Coast is grave and manufacturers are anxiously waiting for the first indication of an announcement of government policy in the matter.

Shipments of Southern Pine continue on a large scale. Mills in the South are complaining of a car shortage for domestic orders. An increase in demand is reported for yard stock and some of the better grades are showing a tendency towards higher prices. Reports from 135 mills for the week ending August 10, showed shipments of 112,609,616 feet, orders booked 93,826,368 feet, and production 84,184,826 feet. Normal production is about 91,000,000 feet. Shipments are thus shown to have exceeded production by thirty-four per cent.

The spread of labor troubles to some districts is offset to a slight extent by reports from some Douglas fir mills which have been able to start up again. It is too early, however, to say whether this improvement will continue. Men returned from the salmon fishing fields and from harvests will soon be drifting to the coast and may relieve the labor situation. Inquiries for Douglas fir lumber are plentiful and many of them would result in orders if conditions were more satisfactory. Indications are now developing of a fair fall demand from agricultural districts. The output of ship timbers is very large. Sales are reported of Douglas fir timber for shipment to eastern Canadian ship builders. There is a fair supply of cars for Douglas fir shipment. Pacific Coast prices continue firm in all regards.

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

Great Britain

Lumber stocks belonging to merchants and yard-keepers at London have been reduced so much of late that they now have almost nothing to offer, and anything in useful sizes for immediate use is quickly taken up. Much stock continues to move out on dock, and there is no sign of anything in the nature of accumulation. Prices continue to advance as stocks decrease, and it is still very difficult to obtain new stuff, even with the permission to import under certain conditions which has recently been granted.

According to the latest information from Liverpool, the Board of Trade has intimated that hardwoods from North America are to be placed on the same basis in regard to imports as softwoods, namely, that they may be imported in neutral sailing vessels or as deckloads on vessels controlled by the government. However, as has already been noted, this concession is not likely to develop anything extensive in the way of imports. There is nothing reported in the way of c.i.f. transactions in spruce deals. Prospects of private traders obtaining spruce are almost nil, as they cannot import it at a price which would leave them a profit above the prices of January 31, with 33 1/3 per cent. added. Under these conditions there is no object whatever in importers risking their money. The spot market at Liverpool is quiet, on account of scarcity of stocks. There is a good demand, which would make lively trading if stocks were available. Much the same conditions prevail in connection with pitch pine. There is no c.i.f. market for birch, and the spot market shows no change. The demand still continues strong, and available stocks are steadily diminishing, while the prospects of obtaining fresh supplies are very poor. The timber trade of Manchester is tied up in a similar manner to that of Liverpool. Many important dealers assert that the timber trade is on the edge of a precipice, and will soon come to grief unless the government relaxes its restrictions to a far greater extent than it has. There is plenty of enquiry, which would mean good business under other conditions. Builders are having a very difficult time in obtaining stocks that they require. At Glasgow timber trade conditions have been a little more active lately than usual. A fair enquiry is reported and a moderate amount of selling for shipbuilding and War Office requirements. Available stocks on the market are very short, and the volume of selling is, therefore, much restricted. Glasgow merchants agree with others that the concession in favor of deckloads from North America is of little value, and that if there is to be any appreciable importation from Canada this season more feasable shipping facilities will have to be granted without delay. The demand for airplane timbers is very strong, and some sales of clear spruce and walnut have been taking place at almost fabulous prices.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Ottawa Market Report—Prices Continue Firm

Ottawa, August 27.—(Special to the Canada Lumberman.)—The Ottawa lumber market during the closing weeks of August showed little or no change in comparison with the two preceding weeks. Outside of the 10 per cent. advance announced by retailers during the latter part of July there has been little to report in the market by way of price changes. Some stocks have been increasing in price all along, and continue to do so.

The market is firm, and there is no tendency to lower prices. The outlook is toward still higher prices for the coming fall and winter. Considerable anxiety is being expressed by the heads of some of the local mills regarding the curtailing or total cessation of shell box manufacture in Canada. In some quarters doubt is being expressed as to whether or not the end of the shell box contracts has been reached. One large retailer, in the course of conversation with the representative of the Canada Lumberman, said that if the shell box contracts had come to an end the woodworking industry would receive a severe blow. "That (making shell boxes) has been all that has kept us going since the war began. There is no building to speak of. Without the shell box business there is not enough work to keep the plants busy." On the other hand, some manufacturers are not expressing much concern over this matter. What is troubling them is the labor situation and the outlook for getting out wood from the bush this winter. Nearly all the mills are having trouble with labor. The retailers who are manufacturing shell boxes claim that with the men getting higher wages the majority of them do not care to work as hard as formerly, except on piece work. Bushmen are scarce and hard to get at any price. The Booth interests are having a hard time, though John R. Booth is offering the highest market price for such labor. In the pulpwood industry a shortage has been predicted for this fall and winter.

The W. C. Edwards Company is one of the few firms which report labor as being "satisfactory so far." This applies to both the mill and woods operations. This company states that it has not yet estimated what amount of wood it will attempt to cut this winter. Its plant is working on shell boxes, and is also doing a considerable export business to the United States. Enquiries and orders with this firm are "satisfactory," considering existing conditions.

Stocks of dry lumber are growing leaner every day. There is a tendency toward careful buying now on the part of the retailer, and he is purchasing only what he requires for immediate operations. Retailers also report a smaller supply from the small mills in comparison with last year, and are looking to the larger mills to furnish them with such material as they are likely to require later on. This careful buying on the part of the retailer is attributed to the shell box outlook, which, to say the least, is considered none too promising. In the event of some of the plants having to close through shortage of contracts, they do not want to have large supplies of lumber on hand to carry over.

Jackson C. Booth reports that "we cannot tell where we are at under existing conditions." The export restrictions and the labor situation are the two chief factors of uncertainty. The high cost of supplies for bush operations is also having a strong effect upon the situation.

The green cut is beginning to move more plentifuly, though so far in volume it does not equal the proportions of last year.

With the manufacturer the labor situation is causing most concern. Some manufacturers state that while there may be a cessation of shell box contracts for the larger size shells, the manufacture of the boxes for the smaller shells up to 18-pounders may be carried on. No contracts are being let for any size of boxes, and the majority of the work is on old contracts.

There is a possibility that Canadian shell box manufacturers may secure American contracts if the factories in the United States are not capable of fulfilling all the requirements of the American Government. In any event, even if American manufacturers can supply the number of boxes required, a great amount of wood will be used, and the Canadian lumber market will benefit, directly or indirectly.

Montreal Markets—The Camp Outlook

Montreal, August 24.—(Special to the Canada Lumberman.)—In discussing the outlook for lumber, wholesalers express the opinion that prices will have a decided upward tendency. All indications point to a scarcity of labor, both for woods operations and for mill purposes. Shantymen, too, have demanded and are receiving an appreciable increase over the wages of last season, and prices of commodities for camp use show a further advance. All these causes make for heavier operating costs and for a very short cut. The higher expenditure will have to be met by an increase in the price of lumber, which would also be influenced by shortage in supply if the cut be as limited as is foreshadowed. Some of the larger manufacturers state that they look for a considerable diminution in the amount to be cut.

Trade is rather quiet. This is due to a falling off in the demand for box lumber, owing to the filling of a number of contracts, the slackness in building, and the usual summer dullness. Enquiries from the United States are also stated to have decreased, although business is still fairly good. Prices, however, all along the line remain very firm, with every appearance of keeping strong.

There are renewed complaints of car shortage, but a firm handling British Columbia stock states that the cars are coming through in good shape.

Shipments to the United Kingdom have increased slightly. The rates are $90 a standard, prepaid. Since the alteration in the system of payment, rates have been placed on a basis of Canadian currency instead of sterling. Lately a little pine has been shipped. The permission to carry deck loads is a dead letter. As was pointed out in our last issue, deck loads can only be carried when the vessel is loaded above the Plimsoll mark; but so great is the congestion of goods that vessels are loaded to the limit with ordinary cargo, and there is no chance for deck loads of lumber. A considerable quantity of stock for aeroplanes, from United States points, is being shipped through Montreal for the United Kingdom.

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SPELL IT BACKWARD
PURE SEPARATED MILK
IN POWDER FORM
FOR ALL COOKING
WHERE MILK IS NEEDED

"Food must be conserved"

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The whole world is facing a shortage of food—everyone must do all they can to economize and conserve the available food supply.

One practical way of eliminating all of the waste of one important food—milk—is by using KLIM in all cooking where milk is needed. Klim is the solids of separated and pasteurized milk reduced to powder form. KLIM does not freeze, spoil, sour or permit of any waste.

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Plants: Brownsville, Ont.; Burford, Ont.; Belmont, Ont.; Hickson, Ont.

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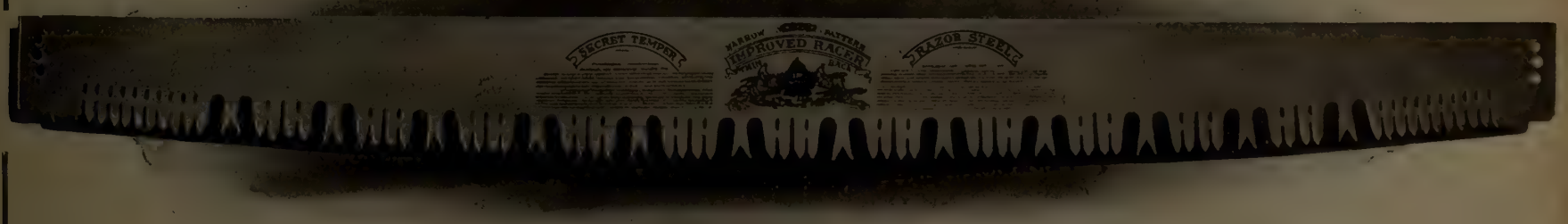
Manufactured in Galt, Canada



We absolutely guarantee every Maple Leaf Saw. The fine Razor Steel used in all our saws is manufactured exclusively for us. Our secret tempering process refines and toughens the raw material to such an extent that Maple Leaf Saws will stand up under the most severe tests and last longer than any other saws on the market.

Write for our catalogue and prices

SHURLY-DIETRICH COMPANY, LIMITED

GALT, - CANADA

WESTERN BRANCH—1642 Pandora St., Vancouver B.C. **EASTERN BRANCH—Hull, Quebec.**

James D. Lacey & Co. Broaden Their Field

The announcement that a New York office has been established by James D. Lacey & Co., timber land factors, Chicago, Ill., is of much interest to the lumber industry. We are pleased to publish herewith portraits of the Eastern manager, Mr. E. A. Sterling, who is in charge of the New York office, and Mr. C. A. Lyford, who has joined the company as its chief forest engineer. The firm of James D. Lacey & Co. have been enlarging their operations in a conservative but extensive manner ever since they commenced business. They now have an exceptionally complete knowledge of timber properties, operations, lumber markets, and forest conditions extending throughout the United States, parts of South America, Canada, and Mexico. In addition to this they have wide interests in timber and mills and conduct a large business in buying and selling high-class properties for clients who are seeking timber investments or operations. They have established, since 1880, an enviable reputation for unvarying honesty, timber knowledge, and fair dealing. which makes a "Lacey report" of great value. With their home office in Chicago, one branch in Seattle, and another in New York, the company now have complete facilities for the transaction of any kind of timber business.

Mr. Lyford's connection with the company puts at its disposal an engineer of the highest standing in forest work. He comes to the company from the firm of Clark & Lyford, Ltd., Vancouver, B.C., where he has had a wide range of activities, giving him a wealth of experience and knowledge in forest engineering work. Before going to the West Coast his work covered much of the pulp region of Eastern Canada. As an indication of the magnitude of the work which he has been carrying on, the firm of Clark & Lyford, Ltd., have made forest surveys of over 5,000 square miles, or over 3,200,000 acres, which include complete surveys, timber estimates, topographical maps and reports. Mr. Lyford was in direct personal charge of much of this work. frequently spending weeks and months in the forests in order that the surveys might be perfected on a high engineering basis. Mr. Lyford was instrumental in effecting an improvement in survey methods and putting timber estimating on pulpwood properties on a new, scientific basis. He has also been in charge of a British Columbia logging operation for some time, and has contributed to the development of one of the most efficient camps on the British Columbia Coast. In addition to all this, he was formerly connected with a hardwood logging operation in West Virginia, and previous to this was with the United States Forest Service on field work, which gave him experience in various parts of the United States. Mr. Lyford is a graduate of Cornell University, where he took the degree of forest engineer. In the Seattle office of James D. Lacey & Co. he will co-operate in field work and also participate in the selling of timber properties.

Mr. E. A. Sterling, the Eastern manager at the New York office, is best known to the lumber industry through his connection with the National Lumber Manufacturers' Association as manager of the trade extension department. He also obtained the degree of forest engineer from Cornell University, in 1902. For a short time he served as forester with the New York State Forest Commission. After leaving college he entered the United States Bureau of Forestry, in the service of which he traveled extensively in many parts of the States. He prepared and secured the passage of the first comprehensive forest law to be enacted in that state. In 1905 Mr. Sterling was appointed chief of the Division of Forest Extension in the Forest Service. In 1907 he became chief forester of the Pennsylvania Railroad, and was accordingly the first railroad forester in America. After five years of this work he opened an office in Philadelphia as consulting forest and timber engineer. He handled the publicity work of the Forest Products Federation, held in Chicago in 1915, which subsequently resulted in the creation of the Trade Extension Department of the National Lumber Manufacturers' Association, of which Mr. Sterling remained as manager.

The other members of the firm are James D. Lacey, Wood Beal, and Victor Thrane.

Knowledge the Source of Trade Success

By John T. Madden

In my opinion, the lumber industry will derive incalculable benefit if a strong, aggressive association initiates the movement for uniform systems of accounts and exchange of information. I regard this as one of the best mediums that you may employ for standardizing conditions in the industry. The ultimate selling price for the product will be determined, first by the prices at which wood substitutes equally serviceable for a given condition may be procured, and the price which the public can be educated to pay for lumber.

Having established accounting methods in the retail industry, as well as in the wholesale and manufacturing branch of the business, there must be a tendency to stabilize conditions. This stabilization will be brought about, first, through the elimination of reckless competition; and, second. by a fair division of the profits to be derived in the industry among all parties. By this I mean that the wholesaler will see to it that the retailer receives his goods at a price which will enable the latter to market the same and make a reasonable profit over all expenses and cost, and, in turn, the manufacturer must sell his products to the wholesaler at such a price as will enable the latter to realize his reasonable profit over the cost of doing business. The three great parties at interest will undoubtedly work more satisfactorily under these conditions for their mutual interests, and, in addition, by the right kind of publicity, the public will be educated to the point of allowing all parties to make a reasonable profit on their investment.

I have found that you can always depend upon the man in the street to give you a fair deal if you will meet him half way and lay your cards on the table face up. The best way for business men to overcome or avoid reactionary legislation and adverse court decisions is to play fair with the public. A few of the far-seeing, broad-principled, and intelligent business men are realizing that conditions are changing. At a convention of the leading men in a prominent industry about two months ago one of these far-seeing men addressed his colleagues in this strain:

"Gentlemen, conditions are changing, and we must change with them. The methods which we employed a generation ago cannot be used to-day. We must read right the signs of the time, and in future conduct our business operations in accordance with this change in public policy."

Hence, in the multitude of conflicting interests, you of the lumber industry must safeguard your interests in the proper way. Lobbying,

E. A. Sterling

C. A. Lyford

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When you have a requisition for groceries for the Camp, always remember that this is where we come in good and strong. We have for many years paid close attention to this branch of our business, and aim to have continually on hand all kinds of goods which would be of interest to the buyer of groceries for the Camp.

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combinations in restraint of trade, or any of the other favorite devices of the past for accomplishing your ends, worthy though they might be—must not be employed. Your only right to exist comes from the fact that you are rendering a service to the community; that you are rndering this service at the lowest cost and retaining for yourselves something which the public will never begrudge you—namely. a reasonable rate of return upon your invested capital.

From what little experience I have had in auditing the accounts of retail lumber dealers, I realize that many of them are not in an any too prosperous condition. I have in mind a dealer whose annual business approximates $500,000 a year and whose net profits, after paying himself a reasonable salary, do not amount to 6 per cent. on his invested capital. And I think that his case is typical of the retail industry.

One great source of loss in the past has been from bad debts. I recall another lumber dealer whose accounts I audited, and when looking over the ledger, preparatory to laying out the work, I found an account therein which I had never seen before in a lumber dealer's books. Upon investigating the account for the purpose of seeing what was in it, I found that it was this dealer's custom to transfer from his good customers' accounts to this specially named account all the bad and doubtful debts which he had. The amount was quite considerable, indicating that the policy of granting credit in this particular case must have been lax. However, the lumber dealer himself was somewhat of a wag, because he had named the account most appropriately—it was labeled "Graveyard"—there lay the dead ones; there lay the buried hopes of profits.

I have known of lumber dealers and other men in the building supply trade to grant credit to an individual who had just emerged from bankruptcy on the same terms as before. I know that it is difficult as a practical matter to handle the situation; I realize that your competitors will frequently grant credit if you will not; and I know, also, from men long in the trade that sometimes men who have failed in business, or who are poor credit in the early part of their business careers eventually become factors in the contracting business. I have in mind a very prominent name in the contracting line to-day, who could not secure five cents' worth of credit fifteen years ago from most of the dealers in the metropolitan district. His name to-day is a by-word in the contracting business. Perhaps some of you know him.

Losses from bad debts, of course, increase your cost. Until you adopt as an association a new credit policy, under which you shall insist that contractors shall have a sufficient amount of their own capital to protect you on credit sales; until you insist upon reasonably short terms of credit; until you insist on prompt and efficient collection methods; until you insist on charging and collecting interest on overdue accounts, just so long will you continue to lose profits through bad debts.

Comparatively few contractors keep scientific costs; many of them do not know how to estimate intelligently. There are also many who do not keep comparisons between estimates of costs and actual results. Until contractors reorganize their business methods and insist upon costs in their own line of work—until then you must insist on stricter terms of credit; in no other way will your percentage of bad debts be reduced.

Now, you can see how this question of costs touches all business men. The absence of proper cost methods in the contracting line is responsible for increased costs and loss in your own, and so it is throughout the vicious circle; for, after all, in the last analysis, we are all socially one great family, and loss, inefficiency, and bad business policies, react to the disadvantage of every member of the family.

Time will not permit me to deal exhaustively with the subject of reducing expenses, but merely to mention that one dealer whose accounts I am familiar with has reduced his delivery charges and expense by 50 per cent. as a result of an intensive study of deilvery conditions. If teamsters and draymen had any brains and could be relied upon to represent your best interests and work for them they wouldn't be teamsters and draymen. It is up to the employer to supply the stimulus which they lack; you must think for them; you must lay out their work for them, and if you do this in a scientific manner, verily your cup of profits will run over and less grog will be pushed over saloon bars and ultimately down the throats of your teamsters and draymen, and your drays and wagons will no longer decorate the landscape in front of the family entrance of some thirst emporium.

I cannot for the life of me remember the name of a single lumber dealer in my own home city of Newark. I know half a dozen coal dealers by name, because I see their advertising. As I ride down in the street cars I see extolled the relative merits of Lehigh, Scranton, and Wilkesbarre coals. Does the average layman or the man who contemplates building a house realize the actual percentage of the total cost of the structure that the lumber will make up? I do not believe so; you haven't educated him to know these things. Does the layman know the merits of the different kinds of lumber and the purposes for which they may be used? I for one do not.

I wish to drive home two or three thoughts. We hear a great deal to-day about industrial preparedness, and I believe myself that it is a very vital issue. Not that you may expect to receive, perhaps, competition in your own line from Europe, but any disadvantageous competition which other lines of business may encounter will react disadvantageously upon you. Many economists believe that it will be some time before European competition will be dangerous. and, as a reason for this, they point out the length of time that it will take to replace the capital wasted in the present struggle. There is one factor, however, which I do not think has received sufficient attention from economists, and that is this—conditions in Europe to-day have forced all of the belligerents to be extremely economical, and to practice saving to the "nth" degree. That which they have been accustomed to under the strain of necessity will be followed to some degree after the war is over. Even in ordinary times the European is more saving than we are, and after this period of enforced saving I believe that Europe will recover her capital losses through extraordinary saving much quicker than any of us anticipate.

To guide you then in your future business life you need to have that broad, fundamental knowledge of business without which you cannot hope to attain the highest measure of success. I recall the experience of a very prominent wholesaler in the Middle West in the beginning of 1914. Perhaps you remember January, 1914, when no one expected a European war, and most of our business men were painting the future in rosy-tinted hues. This wholesaler attended a banquet at which everyone was optimistic over future conditions, and at which it was predicted that higher prices would be realized for lumber than ever before. But this man had that broad basis that knowledge of fundamental business principles that every business man ought to have, and he did not agree with the optimism there expressed. He saw that the stocks of iron and copper were increasing; he had noticed bank clearings; he had followed the exchanges, the effects of exports and imports, and the condition of crops. And he said to himself: "I am a bear on general principles. I am going to sell everything I can at present prices." And so he went out in the market and he took contracts running for the rest of that year at prices varying from the present market price to $3 a thousand higher than the market price, because he found everybody else who had not made a study of these conditions bulling the market. Well, the European war broke out in August, and we all know the result. While. of course, that helped our far-seeing friend, yet we were, according to all the books, due for an economic depression in 1914. whether there was a European war or not. It was bound to come. So, I say, those of us who make a study of business conditions. who know how to read business barometers, who know costs, who know fundamentals, are bound to be successful.

Discussion of "Trade Ethics" in Mill Work Distribution

By L. C. Boyle

The fact that there is much discussion at the present time in the millwork industry over the vexed question of "trade ethics" prompts me to submit some observations.

First, a foreword of explanation:

For several years I have been more or less actively connected in a legal capacity with retail lumber association work. My interest has been somewhat more than professional, due to financial investment in retail operations. A a result, I have naturally absorbed much of the economics involved in the merchandising of lumber products.

In the last three years I have also had occasion to study the lumber problem from the manufacturer's angle. In this connection my work brought me in contact with the national survey made of lumber manufacture conducted by the Federal Trade Commission. It might be of interest to state that the commssion will shortly publish its findings. This document will be of classic interest to every branch of the industry. For, after all, it is but one industry from the stump to the consumer, and this whether the product takes the form of a two-by-four or a highly-fabricated column. The economic error that touches any of its processes finds its way into every branch of the industry.

More recently I have come in contact with the millwork phase of the general problem.

The purpose of ths article is to discuss, as one who stands on the sidelines, certain of the outstanding difficulties that inhere in the distribution of millwork.

As stated, conditions as you find them in any one branch of the general industry have their influence all along the line. Right now we have a runaway lumber manufacturers' market, with the result that millwork operators and retailers are vitally affected. The one in the purchase of his raw material for conversion purposes, the other in buying yard stock for local distribution.

The manufacturer is not actuated by selfish motives. Extraordinary and abnormal conditions exist in the producing end of the industry. Three or four years back present market conditions would

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have been attributed to combination. The public mind was poisoned with the suspicion of a "lumber trust."

Due to a changed mental attitude on the part of government, the industry, through the mediums of the Federal Trade Commission and the Forest Service, has been constructively investigated. The purpose was to get at the facts, not to harass and find fault. The fog of suspicion, ignorance, and political humbuggery has been dispelled, and this as the result of an open-minded grasp of the true situation. It is now understood that a "lumber trust" is impossible, and this because of the spread of operations, the number of competing units 49,000 mills, and the industry's excess capacity.

The reason for the present market conditions is not far to seek. It is not due to combination or monopolistic tendencies on the part of the manufactuers. As I view the situation, the following are the prime factors involved:

1. The outstanding conditions as to car supply.
2. Materials directly and indirectly involved in war demands; also the labor problem.
3. The purchasing power of the dollar has decreased. This is manifest when relative exchange values are studied.

Sure it is that we may expect prices to go still higher. This especially during the war period. Demand will persist and labor supply become more and more difficult.

These are matters with which millwork interests and the retail class should be thoroughly familiar. Through knowledge of the fact a better understanding will be developed as to the true reason for current prices.

As the millwork operators and retail distributors must secure their supplies on an advancing market, it is of first importance that they should conduct their operations so as to meet this changed environment better.

Over and above every other consideration should we bend our efforts to educate the public as to the reason for existing conditions. No one is better situated to do this than the well-informed retail merchant. In comparing prices of the present with those of the past use the yard-stick of comparison in terms of farm products, cost of labor, and necessary supplies essential to conduct the business. Will a thousand feet of lumber buy as much wheat, corn, oats, hay, potatoes, labor. glass, cement, oil, etc., ad infinitum, now as one, two, or three years ago?*

By such means the fact is made manifest that, notwithstanding that lumber products have advanced, they have not advanced in percent as high as almost any other article of commerce.

***Percentage of Increase Since 1914**

	Percentage.
Potatoes	143
Wheat	140
Beans	135
Corn	130
Metals, 22 grades	124
Canned goods	120
Dry goods	102
Lard	100
Shoes	63
Hogs	75
Coffee	40
General level	36
Clothing	35
Oats	26
Beef	22
Domestic coal	20
Lumber products generally	20 to 30
Millwork	15 to 20

Through the local press drive these data home.

Lumber has ever been the industrial goat. The fault lies with us. A house divided cannot stand.

If the manufacturing lumberman, the millwork distributor, and the retailer but understood each other's problem better, and were more disposed to use the Golden Rule. much that now causes eddies and cross-currents would disappear.

Actuated largely by a consideration of these general observations, I was prompted to submit some suggestions, and this fact I might help in bringing home to the retail, and millwork interests especially, the basic need of a more intimate understanding of each other's difficulties and thereby cultivate a spirit of mutual helpfulness. These two branches of this common industry can and should co-operate. Their interests are common, their economic hardships quite similar. On the one hand the sash and door operator, be he manufacturer or jobber, is confronted with co-operative buying schemes and the small local mill, whereas the retailer must contend with co-operative selling plans and the menace of mail order concerns, both branches the victims of secret price-making.

If the small mills multiply and become more vital factors; if co-operative buying schemes develop along substantial lines, or if line yards extend their present tendency to act as jobbers, then indeed must sash and door interests adopt some new method of distribution to meet these changed conditions, and any change that may be thus forced will, of necessity, disturb the now recognized trade rights of the retail merchant class. It is therefore not only to the interest of these two branches to recognize each other's legitimate rights, but, indeed, as I view the problem, community welfare is involved. Any movement that tends to undermine the stability of the rural merchant accentuates the already rising menace of urban growth. This latter suggestion draws a long bow. and the limits of this discussion will not permit extending the argument into the related field. Sure it is, however, that any change in our industrial and economic methods that makes inroads on the business of the so-called country merchant thereby obstructs community development in our rural life. Such result holds a more subtle menace to the future of our national life than those lurking monsters of the deep that now threaten the commerce of the seas. Courage, patience, and genius will find a way to thwart sea piracy, but youth needs light and action. The social element is essential to the young. Make shopkeepers of rural merchants —change the rich and thriving life of the country town to the dull decay of a deserted village, and more than ever will the rural youth of the land turn their faces to the throbbing centres of the already overcrowded cities. History is replete with the record of this folly. As I view the problem, any movement we inaugurate that will strengthen the hands of the retailer is in the right direction, and this because it relates to the public welfare. The obligations involved, however, are twofold—the retailer must do his bit. He cannot handicap and burden the wholesale distributor, playing one against the other in the fierce game of competition and at the same time expect sympathy and support. No, we must study the other fellow's problem and develop the spirit of living and let live.

As we say in the law, "from the time when the memory of man runneth not to the contrary," the retail lumber merchant has been the inspiration, builder, and sure foundation of rural growth. The ready-at-hand material for home-bulding, barn and stock shelter has been made possible through the thrift, energy, and patient courage of the retail lumberman. As modern life requirements have enlarged our needs, the lumber dealer has ever kept abreast of the times, and to-day the local yard is a veritable department assembling establishment for building material. Space will not permit of a review of the genesis and evolution of lumber merchandising. It is an indisputable fact, however, that the local lumber merchant has contributed immeasurably to the growth and prosperity of every rural community in America. Besides his contribution to community and agricultural development, he has and still furnishes the convenient, the economic, the logical and ready means of distributing the output of the mills, and this whether lumber proper or millwork operations.

In thus maintaining a local distributing agency he carries many burdens. In fat years, as well as lean ones, he contributes to the state, county, and community's tax budget. His overhead and interest charges are fixed factors. He is a constant element in the local labor market. When crops fail and money is scarce he carries on his books, and this without interest, many accounts.

These are but a few of the outstanding items that appear as debit obligations on the retailers' ledger. In addition to all this, he has ever assumed the position as the local representative for lumber products in his community. Precedent, habit, and custom are powerful elements in persuasion of personal right.

Because of this situation the local dealer frankly resents any invasion of his trade territory by the outsider. With fixed conviction in the justice of his cause, he condemns the manufacturer or jobber who, posing as a wholesaler, slips into his territory and takes some substantial order, thereby leaving the dealer the skimmed milk of the local trade.

The greater volume of lumber products is sold locally in wagon or less than wagon lots. It is not only impossible, but indeed economically out of the question, for the wholesaler to serve this trade. Further, when we consider that a substantial per cent. of these small lots sales are sold on credit, and necessarily so, we gather some impression of the vital service the dealer renders his community.

Likewise. the dealer contends that it is unfair, unethical, and contrary to sound business principles for the manufacturer who sells to the regular trade to sell also to mail order concerns. He feels that the mail order system is at war with yard distribution; that mail order methods are frequently unfair and deceptive, and if given support are calculated to bring confusion and ruin to legitimate business, and this with unhappy results to the economic, industrial, and social life of rural communities.

The mail order business is but a form of retailing. The assembling plant is located in some large city, where, by the way, the mail order concern, generally speaking, sells no lumber. In passing it might be interesting to consider and analyze the fact that if the claims of the mail order house were true, could the city retail yard survive? The city offers the largest possible field for lumber distribution, and, although

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this market is at the doorstep of the mail order distributor, the city dealer is not to any appreciable degree confronted with this competition. City yards multiply in the very shadow of this marvelous opportunity to get cheap lumber. The scheme is to compete with the country merchant whose yard is located hundreds of miles away. Why? It is my opinion our old friend of circus fame, P. T. Barnum, gave the answer. When it is further consdiered that they require spot cash, one wonders how they do it. But we must remember that they do distribute interesting reading matter, and then the pictures have their appeal. Advertise!

The far-reaching and manifold ramifications of the problem for review prohibit extended discussion; to treat the subject so would require more space than the active business man could find time to cover. The method must be suggestive rather than analytical.

(To be continued.)

The History of Veneer Cutting

By John C. McCauslan
of Henry Disston & Sons, Philadelphia, Pa.

To look back fifty or more years in the making of a veneer and to compare methods obtaining in those days with to-day's practice of slicing with knives, would be as big a stretch of the imagination as to compare the cutting of boards by the old pitsaw with the modern bandsaw rig equipped with saws 10 in., 12 in. to 18 in. in width, operated at a speed of 8,000 to 10,000 super. feet per minute. Notwithstanding all the advances which have been made in knife machines for cutting veneers, so little change is found in the veneer sawing machine itself that it can be said with all safety to be practically the same machine to-day as it was fifty years ago. The factor of the skill of the sawyer back of the machine is still the prime element of successful cutting.

In this backward glance let us turn our eyes for a moment to old England, where we catch a glimpse of a veneer saw used in the earliest days of the art, the flange of which had a diameter of 10 ft. to 12 ft., weighing in itself some four or five tons. The rim of this flange required 100 segments to cover it, and all together it was a ponderous affair. To-day the veneer saw has a flange about 5 ft. diameter, to which a set of segments is applied, bringing the total diameter to 70 in. or 72 in.

The only changes marking the veneer sawing machine of fifty years ago are those found in some places from the old-wooden stay blocks with stay block screws which reached through holes in the stay block and screwed into the log or flitch to be sawed, thus securing it; whereas the machine of to-day is equipped either with iron stay blocks or with wooden stay blocks containing steel clamps running in steel clamp slides, thus eliminating the screws except for the heaviest flitches. This enables the operator to leave a very thin last board. Right here let me say that a veneer sawyer sets the teeth of his saw differently from sawyers in other lines, setting the teeth for clearance and twisting them at the same time to "polish" the veneer and bring out the figure.

In days gone by, when a man wanted veneers he bought a log, say, of rosewood, mahogany, walnut, or satinwood, as the case might be, and carried it to his favorite mill. In bargaining for the cutting, the owner of the log usually specified the sawyer who was to cut it for him, and then offered a prize of $5 or $10, or perhaps a silk hat or box of cigars, for nicely-cut veneers, with the dancing figure well preserved and, what was most important, the maximum number of veneers to the inch. The sawyer would then be particular to keep his saw sharp, and frequent filing of the teeth was necessary to polish the veneer and bring out the figure and prevent tearing of the fibre of the wood.

The sawing of veneers did not hold full sway long, for knife-cutting machines of the rotary type were used as early as 1846 by a Mr. Titus. and Felix A. Mulgrew, of New York, operated a rotary machine over forty-five years ago. There was also an experiment made by T. B. Wilson, who invented a machine and knife to cut fluted or corrugated veneers. The very earliest veneer slicing machine I was able to get any trace of was operated by means of a hand-lever, and cut veneers 1/16 in. thick, about 4 in. wide. To-day the mammoth slicer, with its draw cut, will make a veneer anywhere from 3/16 in. thick to 1/300 in. The latter, however, is hardly practical. One hundred and twenty veneers to the inch is termed as thin as practicable in the present-day methods.

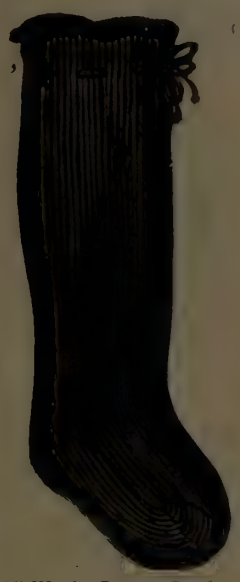
In the consideration of the subject of sawing or cutting veneers the economic objection to the veneer saw is the loss of material in the form of sawdust equal to the thickness of the veneer. To this must be added the markings on the sawn veneer caused by the set of the teeth, necessitating a heavier veneer to permit the removal of these marks in producing a perfect surface. It is, therefore, evident that the only particular advantage of sawing veneers is in cases where the character of the wood requires its being cut on the quarter or where a veneer is required to be used in places exposed to the weather—like the outside of storm doors or front door vestibules—the sawn veneer having a decided advantage over the cut veneer for these purposes. It will

Lumbermen's and Railroaders' Clothing

Guaranteed Pure Wool Mackinaw Coats, Pants, Shirts, Mitts, Socks, Underwear, Etc., of the Highest Grades.

Plain and Fancy Pure Wool Mackinaw Coats, with high seven-inch collar, close fitting, with tab at throat. Sizes 36 to 46.

Smart-Woods Home-made, Hand-knit Wool Mitts, as cut. Generous sizes, perfectly proportioned. For use with large fitting pullovers.



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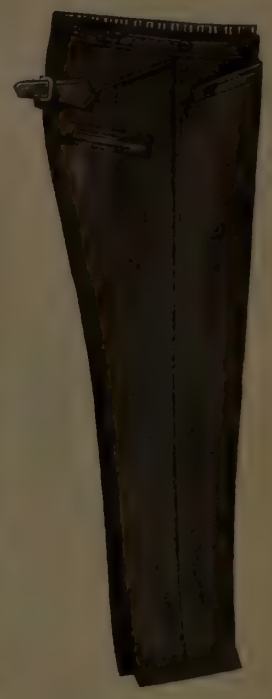

Men's Heavy Pure Wool Mackinaw Pants, as cut. Black, Khaki, and Olive-Green shades. Generous sizes, well made.

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Ottawa — Toronto
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JENCKES BOILERS

Boiler Room of Dryden Timber & Power Co., Dryden, Ont., containing six 78 in. x 20 ft. Jenckes Tubular Boilers.

Enquiries addressed to our nearest sales office will receive prompt attention.

for prompt shipment subject to prior sale.

72 x 18	H. R. T.	Boiler	150 lbs. Ont.
60 x 16	"	"	135 " "
60 x 14	"	"	125 " "
2—60	H.P.	Loco. Type	125 " "
2—50	H.P.	" "	140 " "
2—50	H.P.	" "	125 " "
2—50	H.P	" "	120 " Alta.
3—30	H.P.	Vertical "	100 " Ont.
6—25	H.P.	" "	100 " "
8—20	H.P.	" "	100 " "
4—15	H.P.	" "	100 " "
3—12	H.P.	" "	100 " "

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Works: SHERBROOKE, QUE.; ST. CATHARINES, ONT.

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Trade Mark

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8/4 Firsts and Seconds, 4 cars.
10/4 Firsts and Seconds, 1 car.
12/4 Firsts and Seconds, 1 car.

8/4 No. 1 Common, 4 cars.
10/4 No. 1 Common, 1 car.
12/4 No. 1 Common, 2 cars.

8/4 No. 2 Common, 6 cars.
10/4 No. 2 Common, 1 car.
12/4 No. 2 Common, 3 cars.

8/4 No. 3 Common, 3 cars.
10/4 No. 3 Common, 1 car.
12/4 No. 3 Common, 1 car.

16/4 Sound Boxed Hearts, 5 cars.
20/4 Sound Boxed Hearts, 1 car.

4/4 Log Run Mill Culls Out, 20 cars.

SPRUCE

1916 Sawing

2 x 4 x 10/16 Merchantable, 4 cars.
2 x 6 x 10/16 Merchantable, 6 cars.
2 x 8 x 10/16 Merchantable, 5 cars.
2 x 10 x 10/16 Merchantable, 4 cars.

1917 Sawing

1 x 4 up 6/16 Merchantable, 10 cars.
2 x 4 x 10/16 Merchantable, 5 cars.
2 x 6 x 10/16 Merchantable, 5 cars.
2 x 7/8 x 10/16 Merchantable, 8 cars.
2 x 9 x 10/16 Merchantable, 1 car.
3 x 4 up 10/16 Merchantable, 30 cars.

If any of the above interest you, will be pleased to quote prices

E. M. NICHOLSON & CO.

202 Board of Trade Building

MONTREAL

thus be seen that the development of cutting veneers with a knife has still a long way to progress before the sawn veneer is utterly driven from the market.

So in looking backward to the days when rosewood was the proper wood to use in making pianos, this wood gaining its name from the odor of the wood, down through the cutting of satinwood, which, like all yellow woods, was extremely poisonous to the sawyers, often incapacitating for a time the men who cut it; the cutting of walnut, which now seems to be returning to popular favor; amaranth, a reddish wood from South America; sabieu, a wood like mahogany, coming from the West Indies; prima vera, a white mahogany from the western coast of Mexico; to the present day, we find veneers cut from almost any kind of wood, vast quantities of poplar and gum being cut profitably. We look back over the limited capacity of the veneer sawyer of fifty years ago who could cut a maximum of 1,700 super. feet of oak veneers in an hour, to the present-day slicing machine which can produce 100,000 super. feet of splendid mahogany veneers in a day.

Just an Illustration

The dealer who is adding just so many dollars per thousand to cost for handling lumber, without figuring percentage, is making a grave mistake. Five dollars per thousand added to cost may have been 20 per cent. at one time, and if the cost of doing business was 15 per cent. would have left you 5 per cent. net, but not so today. Five dollars added to present cost would, let us say, figure 14 per cent. Your cost of doing business has increased say 3 per cent. On this basis you would be losing at the rate of 4 per cent. Are you doing this? Better do some figuring on the proposition of costs.

Revised West Coast Grading Rules

The West Coast Lumbermen's Association, Seattle, Wash., have published a revision of their standard specification grading and dressing rules covering Douglas fir car material. This is the result of the work of a specal committee appointed to revise the rules for the grading of car material so as to conform with changes made in the standard rules of January 1, 1917. Supplies of the car rules may be had at 10 cents per copy.

A Good Advertising Device

Several of the members of a large retail lumber dealers' association are using a clever little advertising device which has produced results. A folded but unsealed envelope is printed on the inside as an order blank, space being given for signature. On the flaps are itemized the lines of lumber and building supplies carried by the firm. The address of the firm is given on the face side. One may fill out an order, fold up the envelope, and mail it in a few seconds. These envelopes are sent out to the trade with all advertising matter.

Ottawa Forest River Protective Association

Government sanction has been given for changing the name of the Lower Ottawa Forest Protective Association, which will now be known as the Ottawa River Forest Protective Association. Additional powers are also granted extending the territory on which a fire protective system may be maintained. This territory lies to the west of the original land, is bounded on the south and west by the Ottawa River and the interprovincial boundary between Ontario and Quebec, and extends in a northerly direction as far as the association deems desirable. The expense of fire-fighting in the Grand Lake Victoria division is to be borne by the timber lands in that territory alone.

B. C.'s Pulp Making Industry

During 1916, 65,000 tons of paper and 15,000 tons of pulp were turned out by the mills in British Columbia, and the only problem is the obtaining of markets. Some sixteen years ago the government commenced granting twenty-one-year leases in order to encourage the paper-making industry, with an annual rent of 2 cents per cord of wood cut. The lessees were bound to build and operate a paper mill of specified capacity. Four companies availed themselves of the provision, and three of these have passed from the hands of the original owners, but all plants are now busy.

THE LEADING TRADE JOURNAL

The "Canada Lumberman" for August, the "Annual Number," is a splendid edition, of nearly 200 pages. Its editorial and news columns contain valuable suggestions and real information, while its advertising pages are genuine works of art. The "Canada Lumberman" easily takes the lead among our trade journals.—Algoma Advocate.

YOUR FALL PROVISION ORDER

LET GUNNS TAKE CARE OF IT

EVERY MEAT FOOD REQUIREMENT FOR ANY CAMP

BARRELLED PORK
BARRELLED BEEF
FROZEN BEEF
SMOKED MEATS
SWEET PICKLED MEATS
DRY SALTED MEATS
SAUSAGE
HEADCHEESE
BOLOGNA

Gunns

QUALITY PRODUCTS CAREFULLY CURED PROPERLY PACKED

BUTTER
EGGS
CHEESE
POULTRY
MINCEMEAT
CANNED MEATS
BEANS
PEAS
JAM

EASIFIRST SHORTENING

FOR ALL CAMP COOKING AND FRYING.
COSTS MUCH LESS THAN LARD, GIVES BETTER RESULTS.

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GUNNS LIMITED, - West Toronto

Lumbermen's Tents and Clothing

Pure wool, Waterproof Mackinaw Coats, Pants and Shirts, the kind you have been looking for.

Repellant Brand Army Duck Tents

The best duck that money can buy. We can equip your van complete.

Pure wool Blankets, Sweaters, Underwear. Hand Knit Mitts and Socks. Palmers Shoe Packs, Buck and horse hide Moccasins, etc.

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SANS DIEU RIEN
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Manufacturers and Dealers
White Pine, Red Pine and Yellow Pine,
Lumber and Lath
Excellent Planing Mill Facilities. Prompt Shipments.

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Campbell, MacLaurin Lumber Co.
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Board of Trade Building, MONTREAL

SPRUCE AND **BIRCH**

GOOD STOCKS PROMPT SHIPMENTS SATISFACTION

C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber, Lath and Shingles
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EDGINGS

Ontario

The Seaman Kent Company, Limited, 263 Wallace Avenue, Toronto, have had plans drawn for an addition to their office at a cost of $2,000.

The Toronto Shipbuilding Company, Limited, have commenced work upon the erection of a mill and mould loft at the foot of Cherry Street, Toronto, at a cost of $10,000.

The planing mill belonging to Augustine and Son, Port Colborne, Ont., was recently damaged by fire, the loss amounting to about $10,000. Insurance was carried to the extent of $1,000. A quantity of machinery was included in the loss.

A new Dominion charter of incorporation has been granted to the McAuliffe-Davis Lumber Company, Ottawa, Ont. The authorized capital is $300,000. Among those interested are Mayno Davis, George Kelley, Allan Fraser, Redmond Code. The new company will take over the old company of the same name.

The Port Arthur Pulp and Paper Company, Port Arthur, Ont., are making rapid progress in the construction of their new pulp mill. The authorized capital of the company is stated to be $3,000,000. The plant now under construction will be one unit of three that will finally be built, and this one unit will have a capacity of sixty tons per day.

The directors of the Lake Superior Corporation are considering a plan for the development of their timber properties represented by approximately 3,000,000 acres of woodland along the lines of the Algoma Central and the Algoma Eastern railroads. The plan would provide for the construction of pulp mills at points convenient for shipment along these railroad lines.

W. L. and J. C. Hunter, Pembroke, Ont., whose operations were referred to in the Canada Lumberman of August 15, are owners of 50,000 acres of pulpwood in Ontario and Quebec, near Klocks Mills. They are taking out spruce and balsam pulpwood, and white and red pine logs this year. They are also installing a small sawmill on the Klock limits, and two barkers to peel pulpwood.

Reports from Philadelphia corroborate the recent statement that the International Paper Company will erect a pulpwood plant at Sault Ste. Marie, Ont., and that the product will be shipped to paper mills operated by the company in the United States. The same company is understood to be planning for the erection of a large paper plant somewhere in the province of Quebec. They will pay $250,000 for 100 acres of land adjoining the Lake Superior Corporation's Algoma steel plant at Sault Ste. Marie, Ont.

The Beaver Board Companies, with headquarters in Buffalo, have purchased the assets of the Abitibi Timber Company, Limited, on the Frederickhouse and Buskegow rivers in northern Ontario, comprising an area of 180 acres. William F. McGlashen, president of the company, reports that the holdings of the Timber Company have been transferred to the Beaver Abitibi Timber Company, Limited. The Abitibi holdings, which were recently acquired from the government, comprise some of the best virgin timber in Canada, and are well located for economical woods operations. The new company will at once open timber camps, construct a rossing plant and start a new station at the junction of Frederickhouse River and the National Transcontinental Railroad. The station will be known as Beaver Board Woods. The station will be equipped with a sawmill to prepare and ship lumber for the company's export trade and the manufacture of commercial lumber for the market. The company will also work 16 square miles of large spruce, which is especially adaptable for the construction of aeroplanes.

Eastern Canada

The firm of Dupuy & Cousineau, lumber and grain dealers, St. Lambert, P.Q., has been dissolved.

The assets of the firm of Paradis & Dion, lumber manufacturers, St. Roche, L'Achigan, P.Q., have been disposed of by sale.

H. T. Warne, Digby, N.S., is considering plans for the erection of a sawmill and box factory. He is asking the town council for exemption from taxes and for free water.

The Quebec Charcoal Company, Limited, has been incorporated to engage in the destructive distillation of wood. The incorporators include A. Wainwright, C. G. Ogden and G. V. Cousins, of Montreal, P.Q. The capital stock is $50,000, and the head office is at Montreal.

The New Brunswick Lumber Company, of Augusta, Maine, has been granted an extra provincial license to carry on business in New Brunswick.

The Three Rivers Box Company, who are putting up a $60,000 box factory at Three Rivers, P.Q., are in the market for lathes for turning open candy and butter tubs. The plant which the company are putting up con-

sists of two sheds, 1½ storeys high, 150 by 70 feet, and one sawmill 1½ storeys high, 100 by 40 feet. The manager is M. N. Gilbert, D'Israeli, P.Q.

The South Shore Lumber Company has secured supplementary letters patent in the province of Quebec, to increase its capital stock from $25,000 to $65,000.

The Bellerive Towing Company has been incorporated with head office at Three Rivers, P.Q., and capital stock of $20,000, to engage in transportation and towing. Among those interested are Hugh MacKay, E. Grenfell, G. W. Rowell, and G. P. Kingan, of Montreal.

The large pulp mill which is being erected at Edmundston, N.B., for the Fraser Company, is expected to be completed by next March. Something like two million dollars is being expended on the scheme, part of which comprises model dwellings for the workmen. Four hundred men are now at work on the plant, and good progress is being made.

Western Canada

Alford's Planing Mills, Saskatoon, Sask., were recently damaged by fire.

Seguin and Paradis, lumber dealers, Shortoaks, Sask., have dissolved partnership.

Crawford & Company, lumbermen, Pipestone, Man., recently suffered a loss by fire.

The Highland Shingle Mills, Limited, have been incorporated, with head office at Burnaby, B.C.

The Swift Creek Lumber Company, Limited, has been incorporated, with capital stock of $20,000, and head office at Fernie, B.C.

Doran Bros. & Son's sawmill at Deer Lake, near Vancouver, B.C., was recently burned, with a loss of about $2,000. Insurance was small.

The Vernon Lumber Company, Limited, has been incorporated with capital stock of ten thousand dollars, and head office at Vernon, B.C.

The B. C. Fir & Cedar Company recently had its two dry kilns burned along with 200,000 feet of clear cedar and fir. The loss will be about $20,000. The insurance does not cover the amount fully.

The Kootenay Shingle Mill Company, whose plant at Salmo, B.C., was burned out several weeks ago, is rebuilding. The company has a large gang of men engaged in the work. The mill had a capacity of 200,000 shingles a day.

Liverpool Market Report

Smith & Tyrer, Ltd., Liverpool, Eng., in their monthly market report for July say: Owing to the difficulties surrounding importation and to the government restrictions, trading is now limited to a very small compass, unless we take into consideration government direct operations. Certain modifications of existing government regulations have been granted, but they are not of much use. Pitch pine is reduced to a nominal stock, with no prospects in view of any appreciable supply. Spruce deals.—The relaxation of the regulations with respect to chartering tonnage has come too late to be effective, consequently the outlook for any importation of importance is very gloomy. Birch cannot be shipped under present conditions. Pacific Coast woods are now still more under government control, and business is extremely difficult.

Thessalon's Natural Advantages

The Algoma Advocate, of Thessalon, Ont., in a recent issue, says: "With unlimited supplies of spruce pulpwood north of us; with water-power from the Mississauga sufficient to run great factories, railways, etc.; with deep-water harbor at Thessalon furnishing shipping connection with all the great lakes, Thessalon should be a most desirable site for a paper mill or other big manufacturing concern needing just such natural resources and facilities. A number of people from the United States interested in this sort of enterprise have visited this north country recently, and have gone away full of enthusiasm."

The Department of Lands, Forests, and Mines of the Ontario Government has erected in the forest region of the North fifty observation towers, on each of which a watchman is constantly stationed in order to keep a lookout for fires. The towers are steel structures, about 60 feet in height, and are built on the high elevations of land. So far this season no bush fires of any consequence have been reported to the department.

Heavy rains in New Brunswick recently caused temporary shutdowns at a number of mills, among them being the Fraser mill at Fredericton and the Babbitt mill at Devon.

Up to August 8, 14,500 cars of lumber had been shipped for cantonment construction in the United States by the emergency bureaus co-operating with the Lumber Committee of the Council of National Defence.

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Solicit your kind enquiries for
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Taps — Dies — Reamers — Cutters — Drills

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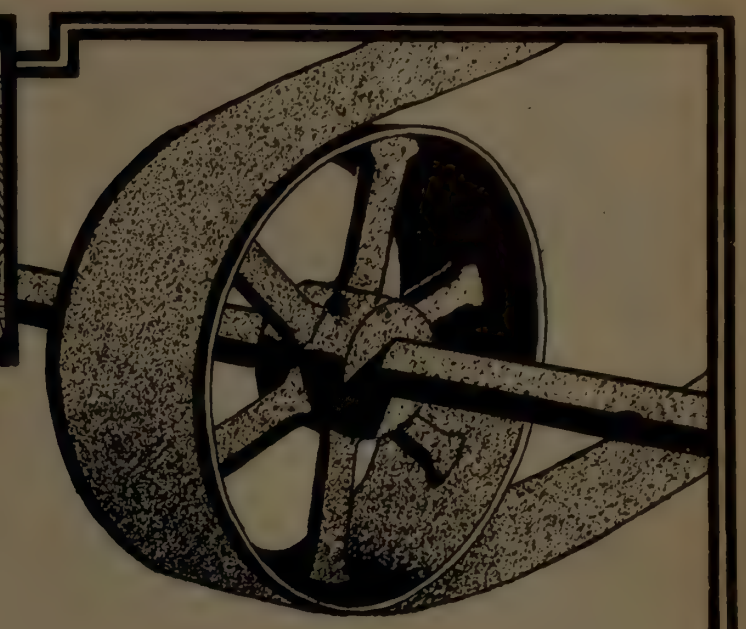


"Acme Waterproof" Leather Belting

This brand is especially well suited to the wet places in a saw or pulp mill and will run true as long as it is in service. When you are overhauling your mill equip it with "Goodhue Belts" and you will never regret it. They are honestly made of solid leather—every inch a good belt and they won't stretch.

Get our details and prices

J. L. Goodhue & Company, Limited

DANVILLE - QUEBEC

WINNIPEG AGENTS—Bissett & Webb, Ltd., 151 Notre Dame Ave., East, Winnipeg, Man.
VANCOUVER AGENTS—Fleck Bros., Ltd., 1142 Homer St., Vancouver, B.C.

THE MOST OF THE BEST FOR THE LEAST

DON'T STINT "THE BOYS" BUT BUY THEIR FOOD CLOSELY

MINCE MEAT
JAMS and JELLIES
BUTTER
EGGS
EGG PRODUCTS
CHEESE
RAISINS
CURRANTS

BESIDES being manufacturers ourselves, we buy from the leading markets of the World and can consequently offer you a range that, in quality and price, few houses in Canada can equal.

While you, of course, cannot afford to stint your men, you have got to watch your costs. You have to buy from that house which can give you the greatest possible value for the least money expended.

In this regard we can be of mighty valuable assistance to you. Write us.

FIGS
SYRUPS
CANNED FRUITS
MILK POWDER
CONDENSED MILK
BAKING POWDER
FLAVORING EXTRACTS,
Etc.

Bowes TRADE MARK

THE BOWES COMPANY LIMITED
72-74-76 FRONT ST. E., TORONTO
FOOD SUPPLIES FOR THE CAMP

Bowes TRADE MARK

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:

1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better	62 00	64 00
1½-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	52 00	54 00
4/4 No. 2 and 3 cuts		33 00
5/4 and 6/4 No. 2 and 3 cuts	38 00	40 00
8/4 No. 2 and 3 cuts	40 00	42 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	35 00	36 00
1 x 6 common and dressing	37 00	39 00
1 x 8 common and dressing	38 00	40 00
1 x 10 common and dressing	40 00	42 00
1 x 12 common and dressing	43 00	45 00
1 x 10 and 12 mill cull stocks	30 00	31 00
1-in. mill cull sidings	27 00	28 00
5/4 and 6/4 x 4 m.r., m.c. out.	35 00	36 00
5/4 and 6/4 x 5 m.r., m.c. out.	35 00	36 00
5/4 and 6/4 x 6 m.r., m.c. out	35 00	36 00
5/4 and 6/4 x 8 m.r., m.c. out.	36 00	37 00
5/4 and 6/4 x 10 m.r., m.c. out	42 00	43 00
5/4 and 6/4 x 12 m.r., m.c. out	44 00	45 00
2 x 10 common	36 00	38 00
2 and 3 x 12 common	39 00	40 00
1 x 8 box and common		33 00
1 x 10 inch box and common.		35 00
1 x 12 inch box and common.		35 00
1-in. mill run sidings		35 00
1-in. mill run shorts		28 00
1-in. mill run Norway		30 00
2-in. mill run Norway	33 00	35 00
Norway, c. and cf. 1-in.	38 00	40 00
Norway, c. and cf. 1½-in.	39 00	41 00
Norway, c. and cf. 2-in.	39 00	41 00
Spruce mill run 1-in. and 2-in.	31 00	32 00
Spruce mill culls	26 00	27 00

Hemlock No. 1:

1 x 4 and 5-in. x 9 to 16 ft.		23 00
1 x 6-in. x 9 to 16 ft.		27 00
1 x 8-in. x 9 to 16 ft.		28 00
1 x 10 and 12 in. x 9 to 16 ft.		29 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		26 00
1-in. No. 2, 6-ft. to 16-ft.		20 00
2 x 4 to 12, 10 and 16 ft.		27 00
2 x 4 to 12 in., 12 and 14 ft.		27 00
2 x 4 to 12-in., 18 ft.		30 00
2 x 4 to 12-in., 20 ft.		32 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		22 00
Clear in. B.C. cedar, kiln dried	50 00	55 00

Douglas Fir:

Dimension Timber up to 32 feet:

8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	42 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16	43 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.	43 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.	44 00
10x20, 18x20, up to 32 ft.	44 50
6x18, 8x18, up to 32 ft.	44 50
6x20, 8x20, up to 32 ft.	44 00

Timber in lengths over 32 feet subject to negotiation.

Fir flooring, 1 x 3, edge grain	43 50
Fir flooring, 1 x 4, edge grain	46 50
Fir flooring, 1 x 4, flat grain	39 50
No. 1 and 2, 1-in. clear Fir rough	50 75
No. 1 and 2, 1¼ and 1½ in., clear Fir rough	56 00
No. 1 and 2, 2-in. clear Fir rough	52 00
1½-in. No. 1, 4-ft. pine lath.	6 00
1½-in. No. 2 4-ft. lath	5 70
1½-in. 32-in. pine	2 75
1½-in. No. 1 4-ft. hemlock lath.	4 50
1½-in. mill run hemlock lath.	4 25
XX B. C. cedar shingles	3 35
XXX 6 butts to 2-in.	4 45
XXXXX	4 95

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2 in.		75 00
Ash, white, No. 1 common		50 00
Ash, brown, 1sts and 2nds, 4/4		60 00
Ash, brown, com. and bet.		50 00
Ash, brown, 1sts and 2nds, 6/4 and 8/4		70 00
Birch, 1st and 2nds, 4/4		58 00
Birch, No. 1 com. and bet., 4/4		47 00
Birch, 1st and 2nds, 6/4 and 8/4		65 00
Birch, 1st & 2nds, 10/4 and 12/4		78 00
Birch, 1st and 2nds, 16/4		85 00
Basswood, 1sts and 2nds, 4/4		53 00
Basswood, No. 1 com. and bet., 4/4	45 00	47 00
Basswood, No. 2 and 3 common		28 00
Basswood, 6/4 and 8/4, 1sts and 2nds	58 00	60 00
Basswood, 6/4 and 8/4, com. and bet.		53 00
Basswood, 4/4, No. 2 com. and bet.		42 00
Soft elm, 1sts and 2nds, 4/4		48 00
Soft Elm, No. 1 com. and bet., 4/4		43 00
Soft Elm, No. 2 and 3 common		20 00
Soft Elm, 6/4 and 8/4, 1 and 2		60 00
Rock Elm, 1sts and 2nds, 6/4 and 8/4		65 00
Rock Elm, No. 2 com. and bet., 6/4 and 8/4		45 00
Soft Maple, 1sts and 2nds, 4/4		48 00
Soft Maple, com. and bet., 4/4.		38 00
Soft Maple, 6/4 and 8/4, 1sts and 2nds		55 00
Hard Maple, 1sts and 2nds, 4/4		47 00
Hard Maple, com. and bet., 4/4		42 00
Hard Maple, 12/4, 1sts and 2nds	65 00	70 00
Hard Maple, 16/4, 1sts and 2nds	85 00	90 00
Red Oak, plain, 1sts and 2nds, 4/4		64 50
Red Oak, plain, No. 1 com., 4/4		44 50
Red Oak, plain, No. 2 com., 4/4		33 50
Red Oak, plain, 1sts and 2nds, 6/4 and 8/4		72 00
Red Oak, plain, 1sts and 2nds, 12/4 and 16/4	90 00	95 00
White Oak, plain, 1sts and 2nds, 4/4		64 50
White Oak, plain, No. 1 com., 4/4		44 50
White Oak, plain, No. 2 com., 4/4		33 50
Red and White Oak, plain, 1sts and 2nds, 5/4 and 6/4	65 00	68 00
Red and White Oak, plain, No. 1 com., 5/4 and 6/4		48 00
Red and White Oak, plain, No. 2 com., 5/4 and 6/4		35 00
Red and White Oak, plain, 1sts and 2nds, 8/4		70 00
Red and White Oak, plain, No. 1 com., 8/4		50 00
White Oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00	85 00
White Oak, ¼ cut, 1sts and 2nds, 4/4		89 00
White Oak, ¼ cut, 5/4 and 6/4 1sts and 2nds		92 00
White Oak, ¼ cut, No. 1 com.		57 00
Hickory, 1sts and 2nds, 4/4		72 00
Hickory, 6/4, 1sts and 2nds		80 00
Hickory, 8/4, 1sts and 2nds		85 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$55 00	57 00
1¼-in. and 1½-in. x 8-in. & up	70 00	72 00
2-in. x 7-in. and up	72 00	74 00
No. 2 cuts 2 x 8-in. and up	45 00	48 00
Pine good strips:		
1-in.	45 00	46 00
1¼-in. and 1½-in.	55 00	56 00
2-in.	56 00	57 00
Pine good shorts:		
1-in. x 7-in. and up	45 00	50 00
1-in. x 4-in. to 6-in.	32 00	34 00
1¼-in. and 1½-in.	53 00	55 00
2-in.	54 00	56 00
7-in. to 9-in. A sidings	30 00	32 00
Pine, No. 1 dressing sidings	42 00	45 00
Pine, No. 1 dressing strips	40 00	42 00
Pine, No. 1 dressing shorts	34 00	36 00
Pine, 1-in. x 4-in. s.c. strips		36 00
Pine, 1-in. x 5-in. s.c. strips		37 00
Pine, 1-in. x 6-in. s.c. strips		38 00
Pine, 1-in. x 7-in. s.c. strips		38 00
Pine, 1 x 8-in., s.c., 12 to 16 ft.		38 00
Pine, 1-in. x 10-in. M.R.		39 00
Pine, s.c. sidings, 1½ and 2-in.	30 00	42 00
Pine, s.c. strips 1-in.		33 00
1¼, 1½ and 2-in.	36 00	37 00
Pine, s.c. shorts, 1 x 4 to 6 in.	29 00	30 00
Pine, s.c. and bet., shorts 1 x 5		32 00
Pine, s.c. and bet., shorts, 1 x 6		33 00
Pine, s.c. shorts, 6'-11', 1"x 10"		36 00
Pine box boards:		
1"x 4" and up, 6'-11'		26 00
1"x 3", 12'-16'		26 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up		28 00
and up, 6-ft. to 11-ft.		26 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.		25 00
O. culls r & w p	18 00	20 00
Red Pine, log run:		
mill culls out, 1-in.	28 00	30 00
mill culls out, 1¼-in.	28 00	30 00
mill culls out, 1½-in.	28 00	30 00
mill culls out, 2-in.	28 00	30 00
mill culls, white pine, 1"x 7" and up	29 00	30 00
Mill run Spruce:		
1"x 4" and up, 6' 11'	24 00	25 00
1"x 4" and up, 12'-16'		30 00
1"x 9"-10" and up, 12'-16'		36 00
1¼"x 7" 8-9" and up, 12'-16'		35 00
1¼"x 10" and up, 12'-16'		36 00
1½" & 2"x12" and up, 12'-16'		40 00
Spruce, 1-in. clear (fine dressing and B)		37 00
Hemlock, 1-in. cull	18 00	20 00
Hemlock, 1-in. log run	23 00	24 00
Hemlock, 2x4, 6, 8, 10, 12/16'	26 00	28 00
Tamarac	24 00	26 00
Basswood, log run, dead culls out	30 00	40 00
Basswood, log run, mill culls out	26 00	28 00
Birch, log run	30 00	32 00
Soft Elm, common and better, 1, 1½, 2-in.	25 00	30 00
Ash, black, log run	32 00	40 00
1 x 10 No. 1 barn	40 00	45 00
1 x 10 No. 2 barn	38 00	40 00
1 x 8 and 9 No. 2 barn		38 00
Lath per M:		
No. 1 white pine, 1½-in. x 4-ft.	5 50	5 75
No. 2 white pine		5 25
Mill run white pine		5 50
Spruce, mill run 1½-in.		5 00
Red pine, mill run		4 75
Hemlock, mill run		4 00
32-in. lath		2 25
White Cedar Shingles:		
xxxx, 18-in.		5 00
Clear butt, 18-in.		4 00
18-in. xx		2 25
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

White Pine

	cts.	
First class Ottawa waney, 18-in. average, according to lineal.	60	65

Oak

According to average and quality	60	70

Elm

According to average and quality, 40 to 45 feet	80	85
According to average and quality, 30 to 35 feet	50	60

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Birch Planks

1 to 4 in.	20 00	25 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.		$74 00
1 in., 8 in. and up wide		83 00
1¼ and 1½ in. and up wide		86 00
2 in. and up wide		88 00

Cuts and Better

4/4 x 8 and up No. 1 and better		58 00
6/4 x 8 and up No. 1 and better		70 00
8/4 x 8 and up No. 1 and better		72 00
6/4 x 6 and up No. 2 and better		61 00
8/4 x 6 and up No. 2 and better		63 00
6/4 x 6 and up No. 3 and better		55 00
8/4 x 6 and up No. 3 and better		59 00

No. 1 Cuts

1 in., 8 in. and up wide		50 00
1¼ in., 8 in. and up wide		59 00
1½ in., 8 in. and up wide		61 00
2 in., 8 in. and up wide		64 00
2½ and 3, 8 in. and up wide		84 00
4 in., 8 in. and up wide		90 00

No. 2 Cuts

1 in., 6 in. and up wide		36 00
1¼ in., 6 in. and up wide		47 00
1½ in., 6 in. and up wide		48 00
2 in., 6 in. and up wide		49 00
2½, 3 and 4 in., 6-in. and up wide		68 00

No. 3 Cuts

1 in., 6-in. and up wide		30 00
1¼ and 1½ in., 6-in. and up wide		35 00
2 in., 6-in. and up wide		36 00
2½, 3 and 4 in., 6 in. and up wide	45 00	48 00

Common and Dressing Mill Run

1 in. x 4 in.		32 00
1 in. x 5 in.		32 00
1 in. x 6 in.		34 00
1 in. x 8 in.		34 00
1 in. x 10 in.		36 00
1 in. x 12 in.		38 00
1 in. x 13 in. and up		38 00
1¼, 1½ and 2 in.		40 00

No. 1 Barn

1 inch	38 00	48 00
1¼, 1½ and 2-in.	45 00	51 00
2½ and 3-in.		55 00
4 inch		58 00

No. 2 Barn

1 inch	35 00	42 00
1¼, 1½ and 2-in.	38 00	44 00
2½ and 3 in.		46 00

No. 3 Barn

1 inch	32 00	36 00
No. 1, 1, 1¼, 1½, 2 in.		34 00

Box

No. 1, 1, 1¼, 1½, 2-in.	29 00	31 00
No. 2, 1¼, 1½, 2-in.		26 00

Mill Culls

Mill run culls, 1-in.		27 00
1, 1¼, 1½ and 2-in.		28 00
No. 2	24 00	26 00

Lath

No. 1, 32-in. pine	2 00
No. 2, 48-in. pine	5 00
No. 1, 48-in. pine	5 50
No. 3, 48-in. pine	4 50
Hemlock Lath, 48-in.	4 50

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac.

Dimension. S. 1 S. and 1 E.

	6 ft.	8 ft.	10 ft.	14 & 16 ft.
2 x 4, 6, 8	16 00	19 00	22 50	23 50
2 x 10	20 00	20 50	23 50	24 50
2 x 12	20 00	21 00	25 50	25 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH.

Mountain Stock.

Dimension.

2 x 4, 8, 12, 14, 16	23 50
2 x 4, 10, 18, 20	25 50
2 x 6, 8 to 16	23 50
2 x 8, 8 to 16	23 50
2 x 4-6 and 8 in.; 24, 26, 28, 30, 32 ft.	31 50
2 x 10 and 2 x 12; 8-16 ft.	28 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	30 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	32 50

No. 1 Common Boards.

4 inch	23 00
6 inch	25 50
8, 10, 12 inch	27 50
Mixed widths	26 50

Flooring.

4 or 6 inch No. 1	37 00
4 or 6 inch No. 2	32 00
4 or 6 inch No. 3	28 00

Shiplap—Finished.

6 inch	24 00
8, 10 and 12 inch	25 00

Siding.

6 inch No. 1	37 00
6 inch No. 2	35 00
6 inch No. 3	27 00

Lath.

No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed)	4 50

PINE—ROUGH TIMBER.

3 x 6 in.; 8 to 16 ft.	29 10
3 x 8 in.; 8 to 16 ft.	26 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	29 00
4 x 10 to 10 x 10, 8 x 8, 6x 12 in. up to 32 ft.	31 00

BRITISH COLUMBIA COAST FIR.

Dimension S1S and E.

2 x 4 in.; 6 and 8 ft.	22 50
2 x 4 in.; 12 and 14 ft.	23 50
2 x 4 in.; 10 and 16 ft.	24 50
2 x 4 in.; 18 and 24 ft.	25 50
2 x 4 in.; 22 and 24 ft.	26 50
2 x 4 in.; 26 to 32 ft.	28 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	25 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	27 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	28 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	30 00
2 x 14 in.; 10 to 16 ft.	30 00
2 x 14 in.; 18 and 20 ft.	32 00
2 x 14 in.; 22 and 24 ft.	33 00
2 x 14 in.; 26 to 32 ft.	35 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	26 00
3 x 8 and 3 x 4 in.; 8 to 16 ft.	27 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	28 00
3 x 8 and 3 x 4 in.; 22 and 24 ft.	29 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	31 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft.	29 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft.	30 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft.	30 50

FLOORING.

Nos. 1 and 2, 1 x 3 in., E. G.	37 00
Nos 1 and 2, 1 x 4 in., E. G.	40 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in. F. G.	30 00
Nos. 1 and 2, 1 x 6 in., F G.	35 00
No. 3, 1 x 4 in.	28 00
No. 3, 1 x 6 in.	33 00

No. 3 Edge grain $3 per M. extra.

SHIPLAP.

B. C. fir, 6 in.	23 50
B. C. fir, 8, 10, 12 in.; 8 to 16 ft.	24 50
No. 2 shiplap, 6 in.	23 50
No. 2 shiplap, 8, 10 and 12 in.	24 50

FIR, COMMON BOARDS, S1S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	22 00
Common boards, 8 to 12 in.	23 00
No. 2 mixed widths	18 00
No. 2 boards, 8 to 12 in.	19 00

SHINGLES.

XXX B. C. cedar	3 05

LATH.

Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's	4 50
Cedar lath, ⅜ x 1⅜ in. x 4 ft.	5 00

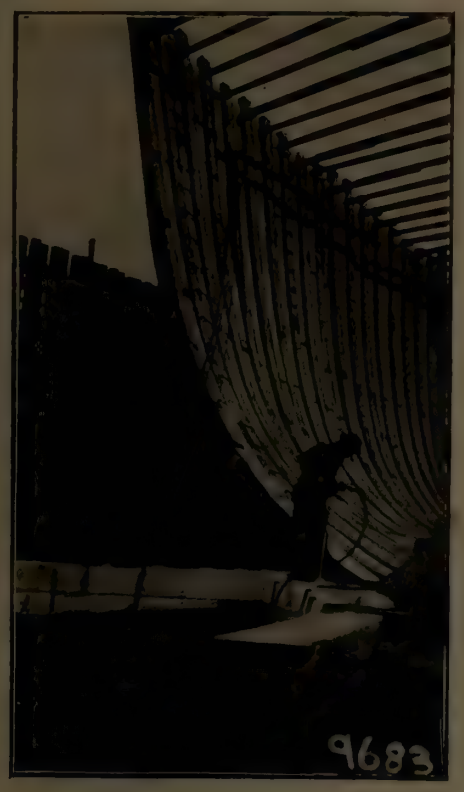
BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers, 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00
No. 1 Moulding 8/4	62 00

(Continued on page 58)



YOU NEED "LITTLE DAVID"
FOR WOODEN SHIPBUILDING
— MORE WORK AND LESS WORRY —

The "Little David" Wood Borer is the "Shipbuilders' Wood Boring Machine," because it is light, powerful and speedy, and above all, simple and durable.

It is made in three sizes, the smallest boring holes in wood 1" diameter and under, and the largest, 4" diameter and under.

All sizes are reversible, and the cases are of aluminum with steel bushed cylinders. This explains why the largest size is about ten pounds lighter than any other wood borer of equal capacity.

We have other labor-savers for wooden ship work, such as the CC-101 Drift Bolt Driver, Pneumatic Hammers adapted for trenail driving, and Pneumatic Tools for horsing oakum, etc.

Our nearest branch will be glad to give you full information, and to send bulletins, etc., at any time.

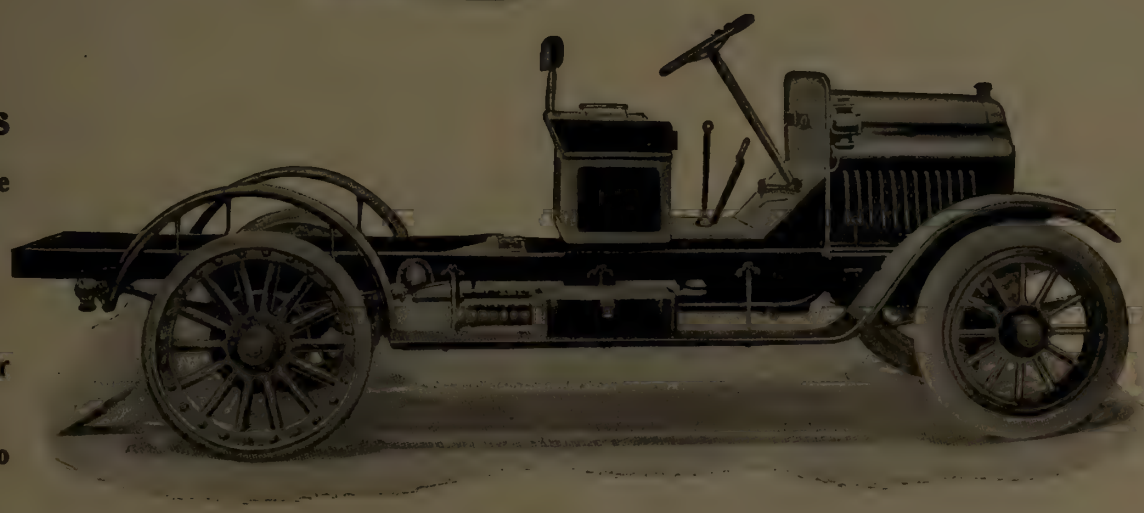
CANADIAN INGERSOLL-RAND CO., Limited
COMMERCIAL UNION BUILDING, MONTREAL. CANADA
Works : SHERBROOKE, Que.

Branches: Sydney Toronto Cobalt Timmins Winnipeg Nelson Vancouver

The "Little Giant" Truck

Special Features

Timken Worm Drive
Continental Motor
Schebler Carburetor
Ross Irreversible Steering Gear
Eisemann High Tension Magneto



Standard Models

"H 4"—1½ tons Chain Drive
"15"—1 ton Worm Drive
"16"—2 tons Worm Drive
"17"—3½ tons Worm Drive
"18"—5 tons Worm or Chain Drive to order

Model 15—1 Ton

THE LITTLE GIANT MOTOR TRUCK enables the retail lumber dealer to give his customers the very best of service, which is the big outstanding argument that interests the busy contractor. Other things being equal, the lumber dealer who can give the best service gets the most business.

The DUNTLEY Hydro-Pneumatic Gas Generator

THE DUNTLEY Hydro-Pneumatic Gas Generator is an exclusive feature of Little Giant Motor Trucks. With this device the Little Giant Truck may be operated on a mixture of one-half kerosene and one-half gasoline, at a saving in fuel cost of over 50 per cent., with a total absence of carbon, smoke or odor.

SELLING AGENTS

Canadian Pneumatic Tool Co., Limited
GEORGE J. SHEPPARD, Vice-President and Manager

BRANCH: VANCOUVER
1073 Hamilton Street

MONTREAL
379 Craig Street West

BRANCH : TORONTO
107 Church Street

CURRENT LUMBER PRICES — Continued

No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda.

	1s & 2s	No. 1 Com.	No. 2 Com.
MAPLE			
4/4	46 - 48	28 - 30	18 - 20
5/4 to 8/4	58 - 60	36 - 38	20 - 24
10/4 to 16/4	68 - 70	48 - 50	28 - 30
RED BIRCH			
4/4	58 - 60	38 - 40	22 - 24
5/4 to 8/4	60 - 62	40 - 42	24 - 26
SAP BIRCH			
4/4	48 - 50	32 - 34	20 - 22
5/4 and up	50 - 52	34 - 36	22 - 24
SOFT ELM			
4/4	40 - 42	28 - 30	20 - 22
5, 6 & 8/4	42 - 44	30 - 32	20 - 22
BASSWOOD			
4/4	44 - 46	34 - 36	22 - 24
Thicker	42 - 44	32 - 34	22 - 24
PLAIN OAK			
4/4	52 - 54	33 - 35	19 - 21
5/4 to 8/4	51 - 53	29 - 31	17 - 19
ASH, WHITE AND BROWN			
4/4	51 - 54	29 - 31	19 - 21
5/4 to 8/4	61 - 64	34 - 36	20 - 22
10/4 and up	74 - 87	46 - 48	22 - 24

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White pine uppers, 1 to 2 in.		119 00
Selects, 1 to 2 in.	106 00	109 00
Fine common, 1 in.		78 00
Fine common, 1¼ to 2 in.	85 00	87 00
No. 1 Cuts, 1 in.		60 00
No. 1 Cuts, 1¼ to 2 in.	70 00	75 00
No. 2 Cuts, 1 in.		49 00
No. 2 Cuts, 1¼ to 2 in.	60 00	66 00
Barn Boards, No. 1, 1 x 12		59 00
No. 1, 1 x 10		51 00
No. 1, 1 x 8		49 00
No. 2, 1 x 12		50 00
No. 2, 1 x 10		49 00
No. 2, 1 x 8		47 00
No. 3, 1 x 12		48 00
No. 3, 1 x 10		46 00
No. 3, 1 x 8		44 00
Canadian spruce boards		38 00
Spruce, 12 in. dimension		38 00
Spruce, 10 in. dimension		38 00
Spruce, 9 in. dimension		37 00
Spruce, 8 in. under dimen.		36 00
10 and 12 in. random lengths, 8 ft. and up		36 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7.		28 00
3 x 4 and 4 x 4 in.	29 00	31 00
2 x 8 in.		33 00
All other random lengths, 7-in. and under, 8 ft. and up	29 00	30 00
5-inch and up merchantable boards, 8 ft. and up, p. 4s		31 00
1 x 2		27 00
1 x 3		27 00
1⅝-in. spruce laths		5 10
1½-in. spruce lath		4 70

New Brunswick Cedar Shingles

Extras		4 75
Clears		4 50
Second Clears	3 25	3 50
Clear whites		2 75
Extra 1s (Clear whites in)	1 75	2 25
Extra 1s (Clear whites out)	1 65	1 90
Red Cedar Extras, 16-in. 5 butts to 2-in.		5 00
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		5 40
Red Cedar Perfections, 5 butts to 2¼		6 00
Washington 16-in. 5 butts to 2-in. extra red cedar.		5 00

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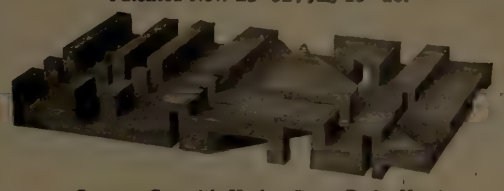

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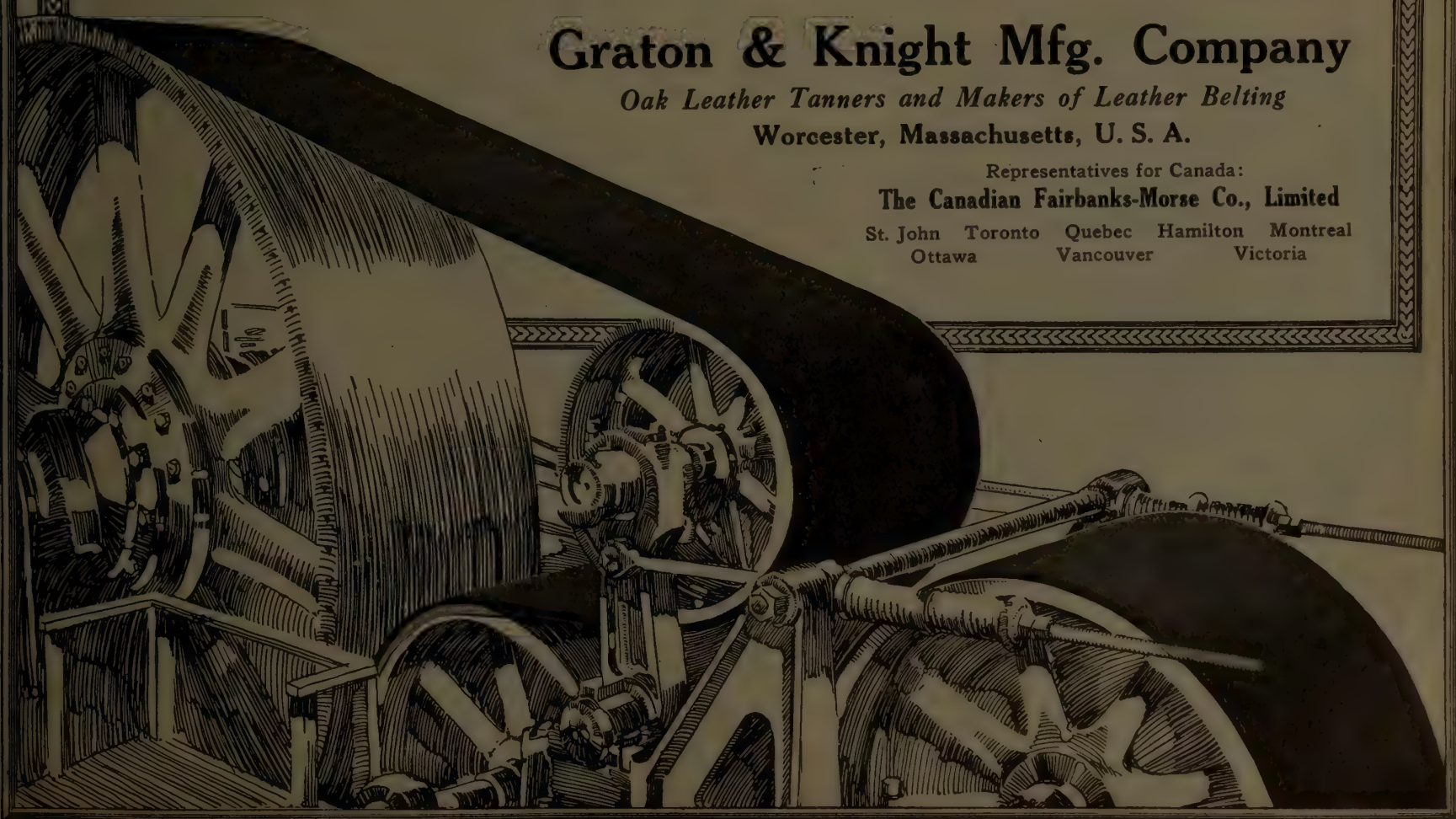

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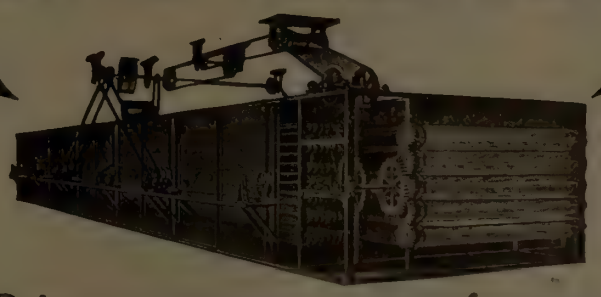

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Fraser Limited
Fraser-Bryson Lumber Company
Gillies Bros.
Grant & Campbell
Hart & McDonagh
Laferte, J. A.
Long Lumber Company
Mason, Gordon & Company
McLennan Lumber Company
New Ontario Colonization Company
Nicholson & Co., E. M.
River Ouelle Pulp & Lumber Co.
Spencer, C. A.
Stone, Fred J.
Terry & Gordon.

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Columbus Chain Company
Jeffrey Mfg. Company
McKinnon Chain Company
Waterous Engine Works Co.

STEAM PLANT ACCESSORIES
Waterous Engine Works Company

STEAM APPLIANCES
Darling Bros.

STEAM TRAPS
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Smart-Turner Machine Co.

STEEL DRUMS
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TAPS and DIES
Pratt & Whitney Company
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TEA
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TENTS
Smart Woods Limited
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Harris Tie & Timber Company
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International Time Recording Co.

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Cant & Kemp
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Dept. of Lands and Forests
Lacey Co., Jas. D.

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West & Peachey

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Smith Company, S. Morgan.

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Canadian Western Lumber Company
Webster & Bro., James

VENEER DRYERS
Philadelphia Textile Mach. Co.

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Perrin, William R.
Philadelphia Textile Machinery Co.

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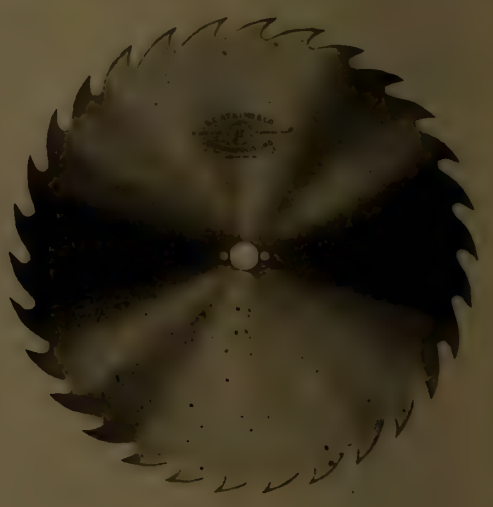
ALWAYS AHEAD!

The most advanced improvements in Saw manufacture have placed us far ahead in the manufacture of Saws for all uses.

Our Band and Circular Saws are worthy examples. They cut more timber—do it with less power and require less repair to be kept in perfect condition.



Economy in mill operation has proved their value. Put them through competitive tests with other Saws.

The Sterling quality of

Atkins Sterling Steel Saws

will overcome your difficulties.

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Dear Sirs

In regard to double ball bearings supplied by you, we find those on line shaft giving entire satisfaction and find them quite a saving on power, as for the ball bearing loose pulleys, they are decidedly the finest and only satisfactory loose pulley we have ever had, no noise or heating and consequently no loss of time, which so frequently occurs with the ordinary loose pulley, we have run the loose pulley on our big matcher for nearly two years and consider it a severe test and it runs as nice to day as the first day we used it can recommend your bearings and pulleys to any one in the manufacturing business especially planing mill work which we have proved.

Yours very truly
L. A. DeLaplante Limited
per W. Costain Supt.

Chapman Double Ball Bearings

have been installed in over 3000 factories of all classes during the past fifteen years, and the above letter is one of many of a similar import, bearing testimony to the efficiency, long life, and cleanliness of the bearing. Some of these have been compiled in a booklet, "Results", which we will be pleased to send on request.

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SAW MILL MACHINERY
ORILLIA, CANADA

Vertical Steam Feed Valve

By reference to the cut, you will note that the valve stems are so connected to the bell cranks that one valve balances the other, therefore they are without friction and work very easily.

Being a vertical valve, the plug is virtually suspended in a film of oil, consequently, will remain steam tight for a long time. It is self draining, and being a vertical valve and connected as shown, when the sawyer's lever is plumb they are both on the centre, and therefore no amount of expansion will affect their proper working.

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The E. Long Mfg. Co. Ltd., Orillia

An Edger for 6" Cants

You can put a 6-in. cant through this edger and know that it will come through edged to a hair. Edger carries 22-in. saws, 6-in. saw collars, leaving 7-in. clear saw blade, more than enough margin for 6-in. stock

Mandrel is 3⅞-in. in diameter, the three bearings that support it are each almost 10-in. long—the rest of the machine is built in proportion. That's why Waterous New Champion Edgers can be crowded to the limit and will turn out full capacity, day after day, without straining.

Notice the feed rolls, two before and two behind the saws. They are machine fluted to give a firm, secure grip on the timber that holds it fast, but will not mar it in any way.

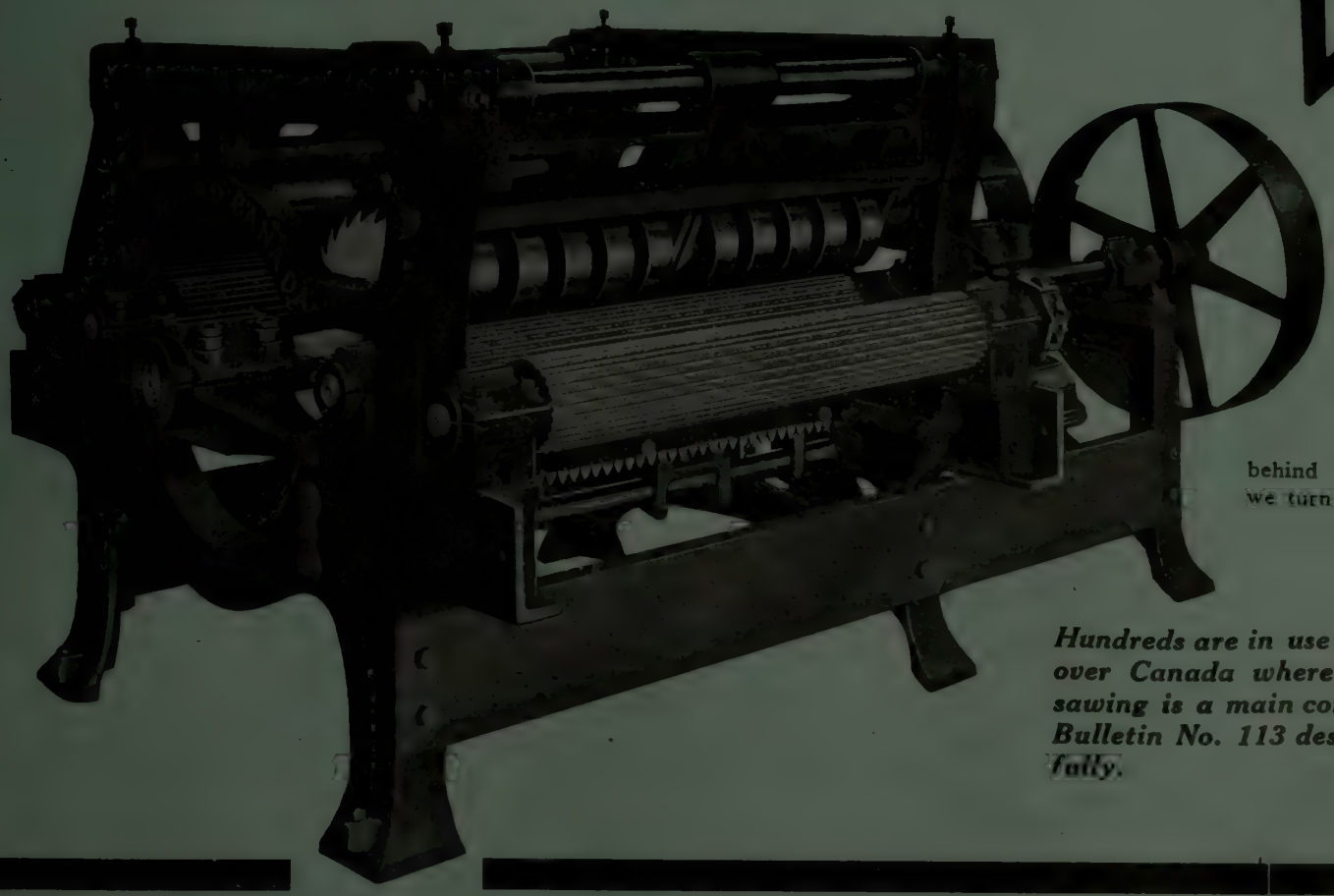
The press rolls are divided, too, making both sides of the machine independent of each other. It's a worth while feature, decidedly.

We build up-to-date Machinery for Sawmills of every capacity—circular or band
Catalogues on request

WATEROUS NEW CHAMPION EDGERS

are built with 40", 48", 56", 60" and 72" opening. They carry as many as four movable and two stationary saws without difficulty.

These edgers cut true and to dimension at all times. The guides are rigid and cannot shift in the cut. They are crowded to correct position and held immovably in place by a steel setting gauge that drops upon them. *No other edger has this feature.*



Waterous New Champion Edgers are fast and accurate cutting, easily operated, and perfectly safe. We stand behind every machine we turn out.

Hundreds are in use in mills all over Canada where quality of sawing is a main consideration. Bulletin No. 113 describes them fully.

The Waterous Engine Works Co., Ltd., Brantford, Canada

$5,000,000.00
worth of mixed metal sold annually.

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Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. Price **30c per lb., Fort William and East; West of Fort William 35c per lb.,** delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our TROJAN BABBITT will stand where all other metals will fail. Price, Fort William and East, **40c per lb.**; West of Fort William, **45c,** delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

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Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

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New **RAILS** Relaying

12 to 80 pounds per yard.

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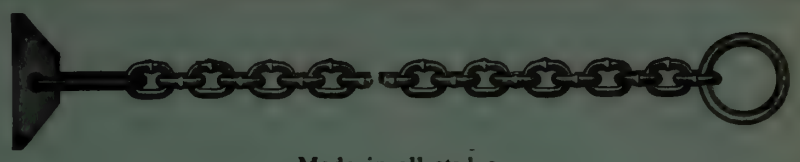

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Electric-Welded Boom Chain

We also specialize

Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

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MADE IN CANADA

A BRAND TO MEET ANY OF YOUR REQUIREMENTS AND SATISFY YOU

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Balata Belting

Waterproof and Stretchless.
The best belt for sawmills.

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Does your work call for a

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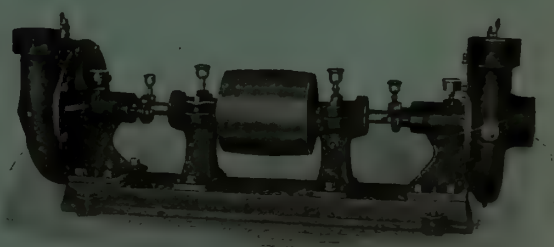
on which you can rely?



Then send your inquiry to

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One of the biggest reasons for choosing Alligator Brand Harness would be the experience of many men using our product under conditions similar to yours. When you buy Alligator Brand Harness you buy a certainty. Over fifty years of business has taught us many points about making satisfactory harness for the Canadian Lumber Trade.

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Alphabetical Index to Advertisers, Page 54 Classified Directory to Advertisements, Page 60

OUR TRAVELLERS

Are Out—Order Liberally

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Merchantable

2 x 3 x 10/16	P. 1 E. 2,500'		2 x 6 x 10/16		10,459'
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2 x 5	22,704'				

1917 SAWING

Merchantable

1 x 3 x 10/16	128,360'		2 x 4 x 8/16	248,053'		3 x 6 x 10/16	263,533'
1 x 4 "	286,212'		2 x 5 "	134,920'		3 x 7 "	188,706'
1 x 5 "	80,514'		2 x 6 "	61,630'		3 x 8 "	137,740'
1 x 6 "	30,004'		2 x 7 "	39,586'		3 x 9 "	124,964'
1 x 7 and up	33,613'		2 x 8 "	16,360'		3 x 10 "	58,640'
			2 x 9 and up	9,000'		3 x 11 "	68,715'

Mill Culls

1 x 3 and up x 6/16 - 47,200' 2 x 4 and up x 6/16 - 62,500' 3 x 6 and up x 6/16 - 118,819'

Merchantable Spruce Lath 1½ x 4'—1,500,000 pieces

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Limited

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Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

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for Prompt Shipment

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15,000 ft. 5/4 No. 1 " " " "
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2 Cars 2 x 10—10 to 16 No. 1 Common Yellow Pine
2 Cars 2 x 12—10 to 16 " " " "
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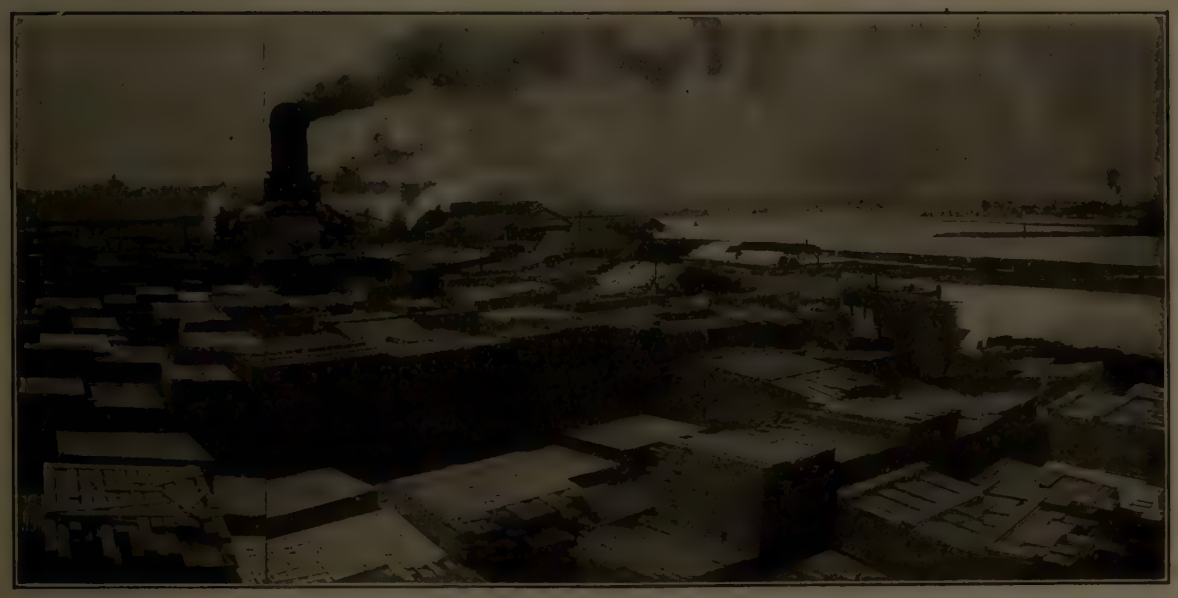
The Long Lumber Company
Hamilton, Ont.



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FIR and CEDAR

Finish
Flooring
Ceiling
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Ceiling
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Spruce—Fifty Pieces per Bundle

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"BEAVER BRAND" Cedar—Full Count

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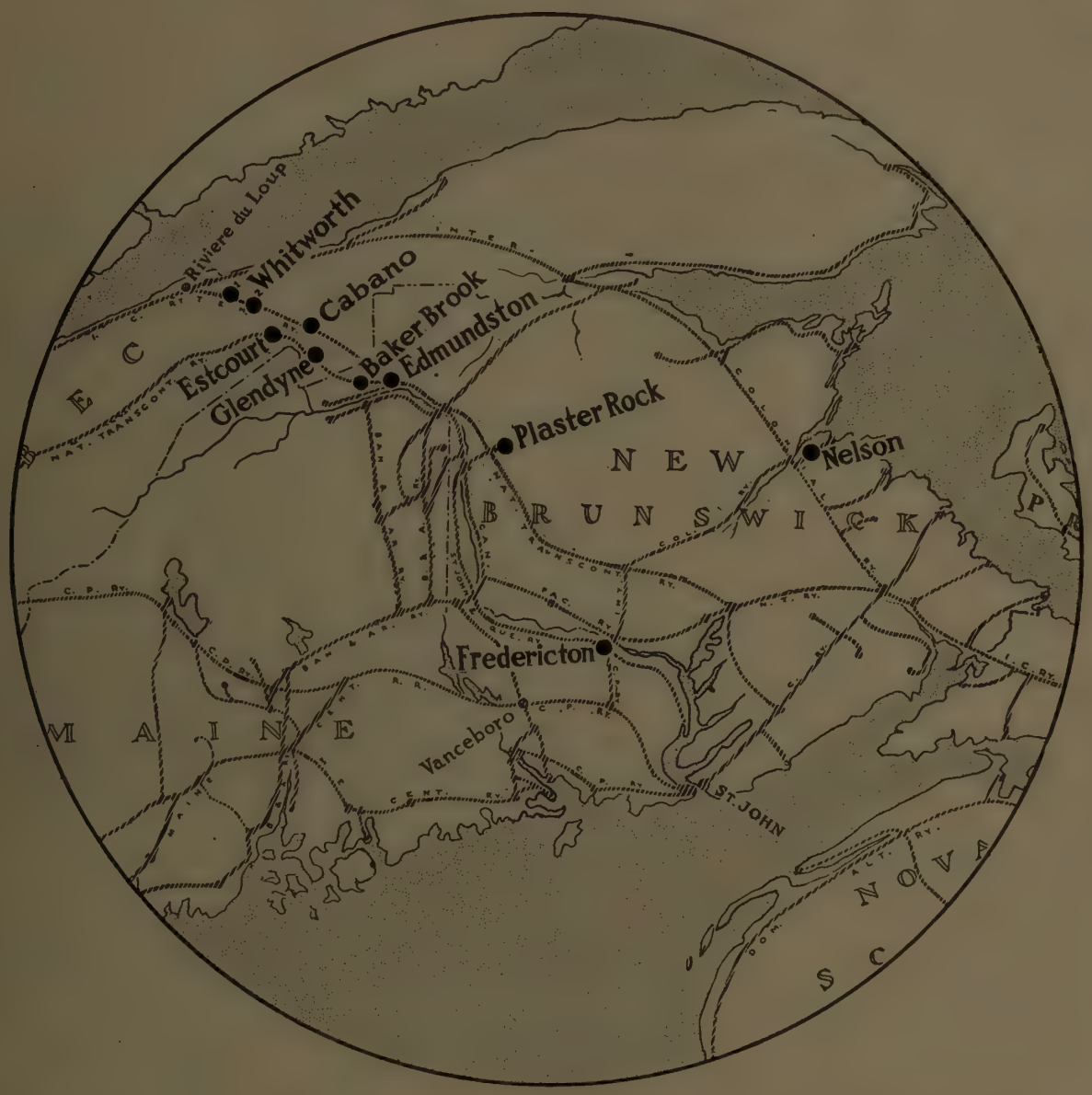
Bathurst Lumber Co., Limited, BATHURST, N.B.

Ten Band Mills to Serve You



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Fredericton, N.B.	Railway connection		C. P. R.
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Nelson, N.B.	"	"	I. C. R.
Edmundston, N.B.	"	"	C. P. R. or Temiscouata Ry.
Baker Brook, N.B.	"	"	Temiscouata Ry. and N.T.R.
Glendyne, Que.	"	"	N. T. R.
Escourt, Que.	"	"	N. T. R.
Cabano, Que.	"	"	Temiscouata Ry.
Whitworth, Que. (No. 1, No. 2)	"	"	Temiscouata Ry.

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175/200 M. 5/4x4" up 6/11'

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Bone Dry
White Pine

The
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Lumber - Lath - Shingles
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Prompt Service

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Prices Quoted on Any Size Order

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Hardwood Lumber

OUR SPECIALTY
$2\frac{1}{2}$ to 6 in. **WHITE OAK**
Specially selected for WAGON and IMPLEMENT use.

Send us your requirements and we will quote delivered prices.

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GILLIES BROS.
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Lumbermen and General Contractors

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Long Leaf Yellow Pine, Louisiana Red Cypress

Annual Capacity 350,000,000 Feet Yellow Pine
50,000,000 Feet Red Cypress

Nature's best in forest products

LET US QUOTE YOU PRICES

Up-to-date mills and unsurpassed ***SERVICE.***

We are ***prepared*** to fill orders—try us.

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Manufacturers
General Offices: EAST ST. LOUIS, ILLS.

California White Pine
California Sugar Pine
and Arizona Soft Pine

Best Stock for Factory and Pattern Lumber

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Standing Timber

in Large or Small Blocks

and

Sawmill Machinery

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Falconbridge and Street for small mills.

We have the following Sawmill Machinery For Sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.
1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.
1 Double cylinder steam nigger, right hand.
1 Log Loader for right hand mill.
1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.
1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.
1 left-hand steam nigger.
1 Log-loader.
1 Endless chain jack ladder with two kickers complete for right and left hand mills.
2 Roger Gang Edgers for 8-in. cants and lumber.
1 Waterous double edger, 6 saws.
1 2-saw Trimmer.
1 20-ft. Slash Table.
1 16-ft. Revolving Slash Table
1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.
1 Lath Mill with bolter.
2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.
1 Hand Machine for cut-off saws.

POWER PLANT

1 Double Duplex, high pressure Water Pump.
5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.
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1 Upright Engine for sawdust conveyor.
1 10 h.p. Engine.
1 Wood Machine for 22-in. wood.
1 Edger for ripping dry lumber, installed.
1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

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26 Ernest Ave.

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Mill Yard.

Spruce, Tamarac, Whitewood and Poplar Lumber

SPRUCE AND WHITEWOOD LATH

Planing Mill in connection with Saw Mill

ROSSED SPRUCE PULPWOOD

Full supply of Seasoned Lumber always on hand.

RICH CLAY LOAM LANDS FOR SALE—Townships of Haggart and Kendry. District of Temiskaming. Excellent opportunities for the settler. Write for particulars.

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Sales Office, BUFFALO, N.Y.

Mills:—Jacksonboro, Ont. Located on Transcontinental R.R., 32 miles west of Cochrane.

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Manufacturers of—

Nailing Machines,

Lock Corner Box Machinery,

Box Board Matchers,

Box Board Printing Machines.

Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

Morgan Machine Company

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T & G QUALITY BRAND
British Columbia Red Cedar Shingles

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Ontario Representatives of
The British Columbia Mills Timber & Trading Company
VANCOUVER, B. C.

Quebec and New Brunswick
Spruce Lumber
Spruce Lath

N.B.
White Cedar
Shingles

Montreal, P.Q., Branch
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Makes

PERFECT WOODWORK

Under

WHITE ENAMEL or STAINS

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BASS WOOD

We offer for immediate shipment—
1" and 1½" Dry Basswood

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We offer in Birch End Stock—
1 x 8½" 1 x 9" and wider
1 x 6 and 7" 1½" to 4"

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Prices promptly given on all enquiries.

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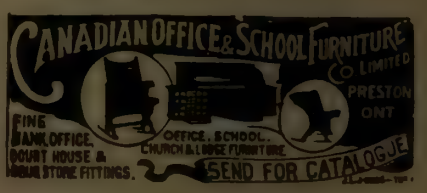

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3 cars 1 in. No. 3 Com. & Btr. Winter-cut Hard Maple.
2 cars 5/4 No. 2 Com. & Btr. Winter-cut Hard Maple.
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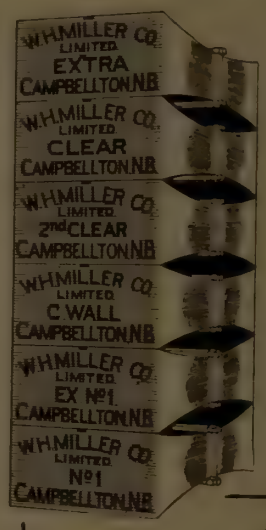

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Shipments by rail and water

Prompt--reliable--carefully handled

We Specialize in

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Hardwood, Hemlock, White Pine

LUMBER and TIMBER

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Grades— GUARANTEED —Quality

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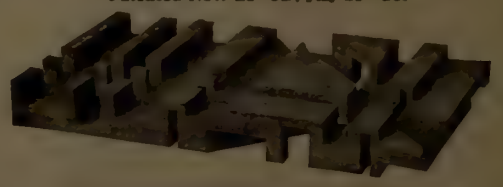

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MONTREAL TORONTO WINNIPEG

Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

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HUGH C. MacLEAN, Winnipeg, President.
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TERMS OF SUBSCRIPTION

Canada, United States and Great Britain, $2.00 per year, in advance; other foreign countries embraced in the General Postal Union, $3.00.

Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster-General for Canada, for transmission as second-class matter.

Entered as second-class matter July 18th, 1914, at the Postoffice at Buffalo, N.Y., under the Act of Congress of March 3, 1879.

Vol. 37 **Toronto, September 15, 1917** **No. 18**

The Disposal of Logging Slash

The fire season in the woods will soon have come to an end—in fact, the danger may be said to be pretty well a thing of the past for this year, but the commencement of logging operations throughout Eastern Canada makes the subject of fire prevention interesting enough to discuss at this particular time. No doubt a good many loggers and lumbermen sometimes think that they hear too much about this matter, and that they know as well as anyone where the danger lies and how to prevent it. Nevertheles, the subject should not be set aside in such a manner, as its importance is too great. This is being recognized by the public and by governments, and the tendency of governments to introduce legislation making some sort of slash disposal obligatory brings it home to the lumber industry.

It is more than probable that important legislation regarding the disposal of slash will be enacted before long by some of the governments of Eastern Canada. Lumbermen ought to prepare in advance for any such development and do what they can to assist the governments in making the laws effective and satisfactory. The situation in the East is interestingly outlined in an article written by Mr. R. O. Sweezey, who has had long experience in the woods of Eastern Canada, which is published elsewhere in this issue. Mr. Sweezey points out that slash disposal regulations cannot be framed in such a manner as to be applicable alike to all portions of the country; that what is suitable for Ontario is not suitable for Quebec, and that conditions in Eastern Canada cannot be treated in the same manner as conditions in the West. It is of great importance, therefore, that any legislation which is enacted should be elastic enough to permit of the best results being obtained, and that local conditions should be the regulating factor in all cases. Mr. Sweezey's suggestion regarding the disposal of slash along the main highways of travel through the forests, where the fire risk is greatest, is probably the most practical proposal that has been made on this subject. It would furnish a useful amount of protection at a comparatively small cost, and would provide in the course of a short time sufficient experience to serve as a guide in extending the protection by more thorough disposal of slash if this is found to be necessary.

Whatever may be done in the way of introducing compulsory or state-regulated slash disposal, the matter is too important to be handled as some forestry matters have been handled by governments in the past. It is not a case for political treatment, but one which requires handling by practical lumbermen and foresters who appreciate the fire risk know the values of our forest resourses and have learned by experience how such problems are handled. There is a lot of valuable experience already available for dealing with the matter, and when the governments take it up extensively they should be able to adopt mehods which are certain to give immediate and generally satisfactory results.

Reducing Munition Output of Canada

As reported in the Canada Lumberman of September 1st, the British Minister of Munitions has definitely decided to reduce the extent of munitions production in Canada. Only an outline of the situation was available for publication in our previous issue. The matter came up for discussion in the Canadian House of Commons a short time ago, and Sir Thomas White, Minister of Finance, in reply to a question, said that a statement had been given out by the chairman of the Imperial Munitions Board saying that the British Minister of Munitions "has now advised that it is unnecessary to continue production in Canada on the present scale. He has directed that certain lines shall be discontinued; that other lines shall be produced in lessened quantities; while some lines are to be continued as at present.

"The effect of this will be to stop the production of shells and components at some plants which are now producing sizes no longer required.

"In other plants, where shells are made of sizes of which a reduced output only is required, it will mean working during the day only, thus stopping night work. In other plants, however, where sustained production is required, operations will be continued night as well as day.

"These changes have been anticipated by several important firms, who have already resumed, or are planning to resume, their pre-war activities in their own lines, while others are engaged in the production or preparation for production, of equipment needed for ships now under construction or to be built during 1918."

Sir Thomas White added that the Dominion Government had advanced up to date to the Imperial Munitions Board, for the purchase of munitions in Canada, the sum of $285,000,000. There had also been advanced to the Imperial Munitions Board by the chartered banks of Canada in the same connection the sum of $100,000,000. For many months past the Dominion Government had been advancing to the Imperial Treasurer for the purchase of munitions in Canada the sum of $25,000,000 per month. During July they had advanced $35,000,000; during August, $35,000,000, and were arranging to continue the advance of $25,000,000 a month during September, October, November, and December.

A reasonable inference to be drawn from this statement by the Minister of Finance is that, while the munitions industry in Canada is likely to decrease gradually from now on, a quite considerable amount of production will take place during the balance of the present year, at least. It seems probable that the intention then is to reduce the output slowly. Manufacturers in Canada, both of munitions and of other products in general, are likely to look with favor upon this method of handling the situation. While it is to be regretted that so many employees will be put into the awkward position resulting from the decrease in munitions output and the laying off of employees, this is a situation which was inevitable sooner or later, and it is a wise plan to bring about the change as gradually as possible. This will, in a large measure, reduce the disturbance resulting from the change. No large body of unemployed will be thrown upon the market suddenly, and it will be possible for other industries to absorb the employees more effectively and satisfactorily to all parties concerned if the process is a gradual one. It is important, also, to bear in mind the pur-

chasing power of the employees. The sudden withdrawal from the market of their demand for all the necessaries of life, and some of its luxuries, would have a very disturbing effect. As it is, only a comparatively small portion of these employees will be out of work at any one time, and the general trade disturbance will be slight.

Many manufacturers have already expressed themselves as well pleased with the plan that has been adopted. Lumber manufacturers, moreover, are hopeful that the change will be a benefit to them by making a larger number of employees available for woods operations during the coming winter and for mill operations next summer. Of course much can happen between now and then, and it is not wise to bank with any confidence upon an improvement of this nature. Operators who are putting crews into the woods now report conditions similar to those of last winter, when men were very difficult to obtain. This winter, moreover, wages are even higher and equipment and food more expensive, so that such relief as may develop out of the decrease in munitions production is being looked forward to with a great deal of interest.

The Retailer's Local Advertising

The retail lumberman can make more effective use of advertising in his local newspapers than almost any other tradesman in his district. This may seem a little bit exaggerated to some retailers who have not yet learned the full value of publicity of this sort, but experience has shown that very definite and extensive results are produced by retail lumbermen in this way. The matter is a simple one. It comes down to the preparation of attractive and timely advertisements, neatly arranged and frequently changed, so that the dealer's name is continually kept before the local readers, and that they almost unconsciously obtain the conviction that this particular dealer is one of the most wide awake business men of the community.

It is not much use for a retail lumberman simply to publish a business card in his local paper. Probably every one in the district knows just who the lumber dealers are and where their yards are located, so that the business card carries very little weight as an advertisement. In order to know how to make the best use of advertising space the retailer ought to put himself in the position of the man who is in the market for lumber. Instinctively such a man asks himself the question, "Where can I get the best lumber to the best advantage?" This is the time that advertising gets in its best work. Such a man will naturally decide in favor of a dealer who has been advertising in the most progressive manner. If there are two dealers advertising in the same community and one of them simply publishes a business card while the other draws attention from time to time to the suitability and value of his different lines of stock for the construction of comfortable homes and useful farm buildings, etc., the prospective customer will lean favorably towards the latter in 99 cases out of 100. The odd case in which he does not favor the progressive advertiser will probably be found to be influenced by something of a personal nature.

Advertising retail stocks is really a matter of continually appealing to possible customers in the most intimate manner that can be worked out. Probably the reference to the utility of a dealer's stocks in building comfortable homes or making much needed repairs and alterations is as good a line to take in such advertising as a dealer can devise. Even this, however, ought to be alternated with interesting personal material appealing to the prospective customers as definitely as possible, so that there may be no monotony about the advertising. It is possible, for instance, occasionally to use advertisements telling all about the ability of your yard to furnish good stocks and to make prompt delivery. Also it is a good plan to tell of the help you can give in the way of simplifying a customer's difficulties. Many a customer knows little or nothing about plan drawing and practically nothing about the suitability of different kinds of wood for different purposes. The retail lumber dealer can help him out of these difficulties in many cases, and if he draws attention to this every now and then in his advertising the fact will be uppermost in the customer's mind when he happens to be thinking of making a purchase.

The different seasons of the year provide opportunities for introducing new thoughts into advertising. Just at present, with the cold weather approaching, but a sufficient interval of fine weather for considerable building operations, it is a good plan to emphasize the home in advertising. Other seasons each have their definite lines that are in most demand. An example of an advertisement by the Valley Lumber Company, Ltd., published elsewhere in this issue, illustrates the point referred to. It is worked out in such a manner as to convince any farmer who has done well with his season's crops that it will be to his advantage now to spend some money upon building operations. Another point, which is particularly applicable to conditions existing to-day is also well brought out, namely, that nowadays a farmer can do better than he has been able to do in the past, as the prices he is obtaining for farm products are high, while lumber is comparatively cheap. This is a point that cannot be brought out too strongly, and is one that is likely to be overlooked by some dealers. The truth of the matter, however, is very clear, as has been pointed out in several preceding issues of the Canada Lumberman, namely, that a given amount of farm produce to-day is equal in value to a far greater quantity of lumber than was the case a few years ago.

Great Britain's Shortage of Houses

There has not been much discussion lately of the requirements of European countries in the way of new buildings after the war. For a time, when the enormous destruction caused by the war was first brought home to us, this subject was uppermost in our minds, but the continuance of the war over a period of three years and the concentration of our national and individual efforts upon the problems of winning it have led us to lay aside some of these subjects for the time being. In the early days of the war the discussion related chiefly to those countries which had been overrun by the Germans—Belgium, for instance—and the demand for building material that all this destruction involved was well appreciated. Plans were laid for handling this business and sharing in the trade which it would create.

Very few of us in those days had any idea that, in addition to this demand, another demand for buildings was developing which would be so great as to tax the producing efforts of every country. It is the case nevertheless that the necessity for new houses in Great Britain is so great to-day that the government is making plans as far in advance as possible to have the building program well under way, even before peace is declared. Before the war the housing problem in Great Britain had become very acute. There had been a steady stream of population flowing towards large industrial centres for several decades, and the erection of new buildings had lagged far behind the country's requirements. Many of the houses in which the working classes of Great Britain live are more than 100 years old. Even 125 and 150 years is not an exceptional age. An investigation into the older parts of Birmingham which was made in 1914 showed that there were at least 50,000 old dwellings that should be replaced, and a shortage, in addition to this, of from 10,000 to 20,000 houses. Reports from Manchester and other large industrial centres showed a similar state of affairs. For the physical well-being of the people and the industrial development and welfare of the nation it had come to be recognized that a remedy must be found without delay, and the government had promised aid in some form. Then the war intervened and the problem was laid aside for the time being. The government is again attacking the situation to-day and is likely to put its ideas into practice promptly.

In a recent article upon this subject the Timber Trades Journal, of London, England, says: "Scarcely any subject outside of that of the

war has received so much attention during the last few weeks as the housing of the working classes. There is no particular reason why the matter should be decided just at the present time, but every question comes to a head at one time or another, and the need for the announcement of some definite line of action has long been obvious. It will be remembered that just before the war broke out the government had promised aid of some description in order that the crying need for better accommodation might be met; but the solution of the problem, urgent as it was, was perforce postponed. The last three years have naturally brought the matter to a more acute stage, fresh building having been entirely suspended, except in certain munition areas. The government has now formulated the outline of its proposals, and with the authority of the War Cabinet the local government board has issued a circular to the various town, district, and metropolitan borough councils, stating the manner in which the problem is to be tackled. In brief, it is proposed to enlist to the full the services of the local authorities, and, in order to stimulate the activity of the local bodies, substantial financial aid will be given by the state. A striking statement has been drawn up by the joint committee on labor problems after the war consisting of representatives of many important and influential bodies. It is stated that no less than a million new houses will be required when the war ends, and that only by having them ready for occupancy will it be possible to prevent a heavy raise in rates (taxes) as soon as the restriction of rents and mortgages act expires. The cost is estimated at $1,250,000,000 and the suggestion is made that if any local body refuses to build its quota the local government board should itself undertake the work."

If the government of Great Britain continues its policy of restricting imports of timber and utilizing home-grown timber resources as much as possible the commencement of this building program will find inadequate stocks in the country for carrying it out. The end of the war, when it comes, will make the shortage more severe. There will undoubtedly be a pressing need for imports of Canadian timber as soon as this plan is put into effect. This is just one of the great sources of demand that are certain to develop for Canada's forest products. The United States and other lumber-producing countries will be on hand at the same time with large supplies, but the outlook is that there will be a sufficient demand to keep every producing plant busy for a long time to come.

It would not be wise to imagine that, on this account, business in timber and lumber and their manufactured products after the war will knock at the door of any country which is not aggressive enough to seek it. Although the demand will be greater than the world has ever known before, the competition among producing nations will be a great deal more keen. It must be borne in mind that in going after this trade two objects will be obtained. One is the immediate business which results and the other is the securing of a footing for future business. It is probable that a few producing countries will show themselves so thoroughly equipped for doing this business that they will obtain a stronger hold upon the trade than others, resembling the hold which Scandinavian countries, for instance, had upon some of the more important export markets before the war. There is a most important matter here for Canadian exporters to study. Aggressive methods will give them the hold upon this trade which their timber resources entitle them to, but which they will not obtain unless they show to the new markets the values and the services they can give are the best obtainable. When the war is over there will be a great shaking up in trade routes and markets, and the opportunity for Canada to do better in its export trade than it has in the past will be a wonderful one.

The Permanent Advantages of Wood

The permanent advantages of wood are well outlined in an article published by the Retail Lumber Dealers' Association of the State of Pennsylvania in their dealers' directory. It would be difficult to prepare a more convincing and interesting summary of the advantages of wood, so we reproduce it just as it is. The clever and persistent advertising given to many substitutes for wood and timber, the article says, might lead the reader to think that in a few years lumber will be either unnecessary or unobtainable. Wooden sidewalks went out of fashion long ago; wooden buildings and shingle roofs are not permitted in restricted sections of cities; boxes of paper and fibre are used in place of boxes formerly made of boards; steel passenger and freight cars and concrete culverts and bridges are common; while structures of concrete, brick, or tile are found on the farms, and steel rowboats glide about the pleasure parks. As a matter of fact, wood has been so cheap and abundant that it has been used for a multitude of temporary purposes and often for purposes for which other products are better suited.

Another stage of economic development has now been reached. Wood is taking its place as one of the finer materials and the coarser uses are being given over to coarser products. This makes it possible to have a relatively larger supply of wood for the purposes for which it is unquestionably the most suitable material. No doubt, also, some of the present use of substitutes is a temporary fad.

The permanent advantages offered by wood may be summed up as follows:

1. Its general availability. Wood is a natural product more widely distributed and more easily obtainable than any other structural material which the earth affords. The multiplicity of purposes for which it is used is surprising, even to those best informed upon the subject. A recent study of the wood-using industries of Illinois showed that in the factories birch is used in the manufacture of 154 different articles, and red oak, longleaf pine, red gum, yellow poplar, white pine, and basswood are each used for 100 to 140 different purposes. Moreover, the new uses developed for wood yearly through discovery and invention offset to some extent the lessened demand because of substitutes in other directions.

2. Wooden structures can be altered and moved or built over more easily and cheaply than can structures of any other material.

3. Wood is very strong for its weight, compared with other structural materials. The average weight of the woods ordinarily used is some 30 pounds per cubic foot; that of iron and steel is fourteen to fifteen times as much. This is a great advantage in handling. A bar of hickory greatly surpasses in tensile strength a bar of steel of the same weight and length. Similarly a block of hickory or longleaf pine will sustain a much greater weight in compression than a block of wrought iron of the same height and weight. Indeed, practically any piece of sound, straight-grained, dry wood is stronger than steel, weight for weight. Moreover, wood will sustain a far greater distortion of shape than metal without suffering permanent injury, while, of course, no such distortion can be sustained by either concrete or clay products.

4. Wood is easily worked with common tools, while to work the metals requires special tools and much power and time. Anyone with saw and plane and auger can build a structure of wood; an ironworker is a skilled mechanic, whose services come high.

5. Wood is a non-conductor of heat and electricity, as compared with metal; and of moisture, as compared with ordinary concrete and brick. These are points for serious consideration in home-building. They also explain why we prefer to sit on wooden seats, work at wooden desks, and eat at wooden tables.

6. Wood does not contract and expand with changes of temperature, while its tendency to shrink and swell with atmospheric conditions can be completely overcome by proper seasoning and painting; hence wood can be made to "stay where it is put."

7. Wood has a varied and beautiful figure, with which no other material can hope to compete, for furniture, house trim, and general decorative purposes. It gives a comfortable, homey atmosphere that can be obtained in no other way.

8. Wood offers a combination of strength, toughness, and elasticity not possessed by any other material. Imagine, if one can, a baseball bat, a golf club, or an axe handle of anything but wood!

Labor Situation Puzzles Operators

The Outlook from a Manufacturer's Viewpoint

Chapleau, Ont...

Editor Canada Lumberman:

As I see it, the lumber trade has reached about the same critical situation that almost every other line of business in the country has, as a consequence of the war. When war broke out, lumber, in contrast with many other stable commodities, was fairly plentiful. Mill yards throughout Ontario were pretty well filled up, and the dislocation of trade for a few months after the outbreak of war meant that the cut of 1915 moved very slowly, and a very considerable quantity was not marketed until late in 1916 and early in 1917.

With the gradual shrinkage in the supply of labor and the increase in cost of all supplies that entered into the lumber business during 1915-16 and 1916-17, the output of logs, and consequently the supply of lumber, has been very conbly reduced until the sawing season of 1917 found practically every mill in Northern Ontario either empty or sold right up to the last board, and the demand for lumber possibly more active than it has been for many years, with the result that, I believe 75 to 90 per cent. of the entire 1917 cut has already been placed in the hands of the wholesaler or distributor, and the demand still continues active. Under normal conditions, this would be an ideal situation, but under 1917 conditions it cannot be looked upon in that light.

Lumbermen naturally are anxious to keep abreast of the market and to feel that their mill yards will at least take care of all the demands placed upon them, so that, commencing with the logging season of 1917-18, almost every man in the business is anxious to take out as large a cut as their mills will handle; and, from the standpoint of the wholesaler and the consumer of lumber, this is as it should be. The difficult point, however, is here, and the question is, can the lumberman, under existing conditions, take out a sufficient quantity of logs to meet the demands that 1918 is likely to place on the lumber market? My own opinion is that it is going to be extremely difficult, for these reasons: The demand for labor in other lines of business is so great and the profits that it is possible to make in other lines of business are so far above normal that I do not believe the lumbermen can compete in the labor market without taking serious chances of not being able to produce lumber, even at the prices prevailing to-day, and without competing, the necessary men cannot possibly be secured. For example: The increase in the wholesale price of lumber has possibly been 30 per cent., while the prospective increase in the cost of operating for the season of 1917-18 is at least 80 to 100 per cent. The direct increase in the rates of wages that are being offered this season in comparison to the rates prevailing in 1913-14 and 1914-15 is 90 per cent. I believe I am well within the mark when I say the decrease in the efficiency of the men that it is possible to secure has been at least 20 per cent.

The increase in the cost of supplies that enter into the logging and sawmill business has been from 50 to 250 per cent. and an average of 100 above normal. I trust you will not look upon this letter as coming from a pessimist. I am one of those who believe that everything will ultimately adjust itself to meet prevailing conditions, but as you asked for a frank statement of what the outlook was as I saw it, I have just given you my frank opinion.

Geo. B. Nicholson.

* * *

Labor Very Scarce for Logging

Little Current, Ont., Sept. 4.

Editor Canada Lumberman:

Our intention is to operate three camps, if we can get the men. Labor seems to be very scarce, and chances are that, on account of shortage of labor, very few operators will be able to get in more than half a crop of logs during the coming season.

Little Current Lumber Company.

* * *

A Puzzling Situation for the Manufacturer

Editor Canada Lumberman:

In a few words, a lumbering operation this coming season looks like a huge gamble. While prices for lumber were never so high, there are so many elements that enter into the situation that, to my mind, it is impossible to make a forecast as to whether they will continue to be as high or go higher, or take a big slump some day. The logging conditions are something unheard of. Men are extremely scarce and very expensive to get, and hard to keep when you get them, and wages are now running at $50 to $55 a month and board. Board will be 30 per cent. higher than last year also.

Lumbermen with large amounts invested in sawmills and plants feel compelled to do something in order to keep the organization together, or, rather, that is about the way I look upon it. Others may take the view that prices of lumber will go higher, and probably think they see a profit even at the extraordinary cost. Cost of sawing this season has also advanced 30 to 35 per cent. over last year. If conditions remain as they are at the present time, by strenuous efforts we may succeed in getting enough logs to run one mill next season. After the harvest is gathered and a number of men are thus let off the farms, and a number of the munition plants are closed down, it is possible that labor may become a little easier a couple of months from now, in which case the production of logs might be added to to some extent.

Ontario Monufacturer.

* * *

Branding Canadian Timber Not Recommended By Australian Merchants

Glebe, Australia, July 10.

Editor Canada Lumberman:

We are in receipt of your letter dated 20th April, together with copy of the Canada Lumberman of April 15.

I have carefully read articles on pages 21 and 29 regarding the proposal to brand all Canadian timber exported to Australia. The writer of the latter seems very earnest in what he says, but there are many reasons why branding lumber in such a manner will neither be an acceptable nor a payable proposition. I went through Canada and the United States in 1901 and inspected all Oregon mills of any consequence. The Hastings sawmills, in Vancouver, at that time seemed to be about the best organized of them all, and these people have always, so far as the writer can remember, branded the whole of their product loaded for Australia with "H.S.M." on one end and the size and length on the other end of the timber. They have also seen to it that the quality has been right up to the average merchantable standard; but the only part which appealed to the merchants here was the fact that the lengths and sizes were branded on the end. We have purchased hundreds of million feet of Oregon since we have been in business, and the only United States mills that we know have branded their timber was one on the Columbia River; and the fact of their having branded it was a detriment if they only knew it, because I have never yet seen one of their cargoes up to the standard. Timber merchants of New South Wales in the past have had their individual initials branded on the timber by the importers, and some of them found it a great advantage when they have run short and had to buy the other fellow's brand, as they considered they were only advertising his business. Branding has, therefore, lapsed into any old form now, and is only used as a shipping precaution where a number of specifications for the various merchants are loaded in the one vessel. Latterly the United States mills have made a charge for this branding, and we, for one, do not purpose paying such charge, as we do not consider it necessary, especially as we usually buy full cargoes.

I have always been a stickler for preferential tariff within the Empire, as I believe this is the only way the difficulty could be overcome; but this war has altered the whole of the ideas of every person in the community. The fact of America entering the war on our side must entitle her to some consideration.

Your Melbourne correspondent refers to the fact of Baltic being branded by the various millers in Norway and Sweden; but where this has been a good thing for some mills who have supplied superior quality it has been a detriment to other millers who supplied ordinary quality timber. When you come down to bare bones you will find that the only concrete fact that weighs with any consumer is his pocket, and if your millers want to get into this market they will have to get their coats off. It seems to me useless incurring costs in spending money in branding timber when the other fellow does not do it, and we do not know any body who is able to tell the difference between Canadian and American Oregon. The better idea would be for the Canadian lumberman to combine together, build vessels made out of their own lumber to carry lumber here (as this would give them a great pull over American millers) and would make a profit by organization, both out of their timber and freight. This would obviate exploitation by private owners of vessels, and enable them to capture this market and hold it against competitors, both now and after the war.

Yours faithfully, George Hudson & Son, Ltd.,

George W. Hudson, Managing Director.

Hon. G. Howard Ferguson, Minister of Lands, Forests, and Mines for Ontario, reports that there have been fewer forest fires this year in Northern Ontario than for a number of years past.

No business can go far towards true success if suspicion and fear are the impulses which govern its members. Trade associations are the machinery of co-operation. Through them ignorant competition can be destroyed to a large extent merely by throwing light upon it, and the basis upon which business is conducted can generally be made more intelligent. . . . Trade associations are, in a way which we do not yet appreciate in this country, the means of salvation for business. In a thousand ways they can help to lift business to a higher plane of efficiency.—E. N. Hurley.

Court Decisions in Lumber Cases

Workmen's Compensation and Woodmen's Lien Problems Subjects of Legal Findings—Ownership of Young Timber

In the case of King vs. Berlin Mills Company (N.H.), 99 Atl. 289, an important judgment was recently given regarding the meaning of "at work in a shop, mill, or factory," under the laws of the State of New Hampshire. According to the judgment, a person employed in building a pulp carrier at a distance of over a mile from a pulp mill is not "at work in" the mill within the meaning of the Workmen's Compensation Act. The finding of the court includes the following statement: "It was held in Boody vs. K. and C. Manufacturing Company that work in a mill included not only the mill buildings in which the business is conducted, but also everything appurtenant to them, such as the dam, flume, yards, and the ways provided for the use of employees—the entire manufacturing plant. But this construction of the statute would not constitute labor performed in erecting a pulp carrier for the defendants more than a mile from their mills work in the defendants' mills, and in no sense a part of their manufacturing plant. To hold that building a pulp carrier for the defendants more than a mile from their mills is working in the mills within the meaning of the statute would lead to results never contemplated by the legislature. Under such an interpretation of the statute those engaged for the defendants in felling trees and hauling them from the forest many miles from their mills could be said to be working in their mills. Indeed, it is dufficult to imagine any manual or mechanical labor that employees of a manufacturing concern could do that might not be construed as work in a shop, mill, or factory. The English Workmen's Compensation Act of 1897 (60 and 61 Vict., c. 37) contained the following clause: 'This act shall apply not only to employment by the undertakers as hereinafter defined, on or in or about a railway, factory, mine, quarry, or engineering work.' This provision is somewhat similar to that portion of our statute that is under discussion, although it is more comprehensive and elastic than our law, in that the word 'about' is used. The English courts in construing the above clause have held that employment at places separate and at some distance from factories, mines, quarries, or engineering works was not work on or in or about them, but that the employment must be at a place contiguous or in close proximity to them, to bring it within the purview of the statute."

* * *

Who Owns the Young Growth?

"Does a limit-holder own the young growth?" A most interesting decision on this point was rendered recently in the courts of Quebec by Judge L. J. A. Desy, of the Superior Court, Three Rivers District. Judge Desy decided that a licensee could sue on fire damage caused not only to his timber of legal size, but to what had not yet attained the dimensions on which his cutting rights were based.

The dispute arose through a suit instituted by a licensee against a railroad contractor who, in the face of warnings, had set fire to a pile of old ties, and caused a serious burn in adjoining timber and young growth, but particularly to the latter. The defendant's lawyer entered the ingenious plea that as the licensee was permitted by the government to cut only what was of a given diameter that, therefore, the government was the owner of what fell under that diameter. Licenses being renewed year by year, argued the defendant, it was preposterous to assert that a license-holder had more than a year's cutting rights, or could assert that certain trees would become his property many years hence when they had reached maturity.

Judge Desy, however, looked upon the licensee as the proprietor of the young growth for the reason that his rights in future increment could not well be cancelled unless by violation of the government regulations. The defendant was obliged to settle the claim, which was in the neighborhood of four thousand dollars.

* * *

Court Denies Company's Right to Block Creek

Mr. Justice Morrison has given judgment in favor of the plaintiff in the case of T. B. Buchanan against the Barclay Shingle Mills, Ltd., Vancouver, B.C., for damages for alleged blocking of Kanaka Creek with shingle bolts. His lordship held that the company had no right to block the creek in the manner they had done. The form of the injunction against future blocking and the amount of damages will be the subject of further consideration. The judgment is subject to the right of the defendants to carry on their operations on the creek in a legal manner.

* * *

Logging Time-Keeper Not Entitled to a Lien

A time-keeper in a logging camp in British Columbia recently brought suit against his employers, under a woodmen's lien claim. His Honor Judge Schultz, after hearing the evidence and arguments, decided that a time-keeper in a lumber camp is not entitled to a woodman's lien, although a time-keeper in a mill is entitled to it. The point arose in the case of Vickery vs. Crockett & Olds.

Robert Dollar Reports Expanding Trade

Mr. Robert Dollar, of the Dollar Steamship Line, Vancouver, B.C., in a recent interview, stated that his company was now handling more freight for overseas than the C.P.R., and the C.P.R. was handling more than it had ever handled previously. "We have not taken a ton of freight from that company," said Mr. Dollar, "but it is all new business that we have transferred from San Francisco when we made Vancouver our home port. The prospects are good, and would be brighter only for the difficulty encountered because of the government stepping in and commandeering space. For instance, we might agree to take some freight for the far East and then the government might come along and say that it required the space. It would make no difference that the space had already been allocated—the government would take it, and the other freight would have to be left."

Mr. Dollar has just returned from a trip across the Pacific, and he reports that trade is going through Vancouver in larger quantities than ever before. There is a shortage of tonnage, and freight rates are abnormally high. Since the establishment of the Dollar line at Vancouver the port's trade has almost doubled. The Robert Dollar Company has a number of lumber mills in China and Japan. Mr. Dollar reports that he is expecting a large extension of trade when conditions become normal. His firm will then build a number of new vessels.

Silver Spruce Demand Very Heavy

The urgency of the demand on the part of the allied governments for silver spruce for aeroplane construction is referred to by the Timber News, of London, Eng., as follows:

"This much-wanted wood cannot nowadays be secured in large enough quantities. The demand, in other words, is greater than the supply. Requirements to-day are for clear spruce of the finest quality, but this grade unfortunately cannot be produced on a very large scale. The proportion of logs coming strictly under this classification is very small indeed. Thus the price of silver spruce to-day has reached a very high level (anything from £100 to £130 per standard landed), and it is likely to go still higher unless some substitute can be found, which is very unlikely. The requirements for aeroplanes alone are very large, and for this work only the very best wood can be used. Wood of an inferior quality, and that cannot stand the required test, is quite useless for the purpose. Consequently, the government have to be very careful in selecting their purchases.

"America is also buying largely of silver spruce, and is going far afield to secure supplies of the wood. Thus it comes about that this particular wood is of great importance to both countries, not to speak of France and Italy, who are also much concerned over the question of supplies. Something, therefore, will certainly have to be done in order to regulate supplies to the respective allies. Canada, whence most of the better class of silver spruce comes, ought to be able to help in this direction, if she is not already doing so. Labor in Canada, unfortunately, is very difficult to obtain nowadays, and this is not helping the felling of the wood. The production of silver spruce, however, is of such extreme importance that the difficulty of procuring sufficient labor ought to be overcome in some way—even at the expense of recruiting."

Hardwood Markets Active and Firm

A summary of market conditions issued by the Hardwood Manufacturers' Association, says that the hardwood market generally continues active and strong with a heavy demand for all that the manufacturers are willing to sell, and production below normal. The dominating factor in the hardwood trade is government business, but furniture factories are running to the capacity of labor available; box factories are running full time, and the truck, vehicle and implement manufacturers are heavy buyers for the kinds of stock used in these industries. The demand for oak is good in the regular grades and thicknesses and unusually heavy for timbers, railroad material, etc., with an increased demand for the manufacture of furniture.

Government Orders Many Railway Cars

In the House of Commons recently the Minister of Railways and Canals stated that contracts had been awarded to the Canada Car Company for 4,000 cars, to the Eastern Car Company for 1,000, and to the National Car Company for 1,000. Four thousand of these are required for government railways and the remainder for Canadian Northern, Grand Trunk, and other lines. Delivery is to be made between October 1 and February 1.

A New Cargo Carrier in the B. C. Trade

The schooner Malahat has been fitted out at Victoria, B.C., for her maiden voyage, on which she will carry a full cargo of lumber from Port Alberni to Australia. The Malahat is the first windjammer to visit Alberni for a number of years. During her maiden trip she will be a real windjammer, as her auxiliary Bolinder engines have not yet arrived from Sweden.

A Diagnosis of Retail Lumber Ailments

Failure to Keep Abreast of Modern Selling and Serving Ideals Responsible for Falling Behind in the Race for Business

At the annual meeting of the National Retail Lumber Dealers' Association, on September 7, Mr. Julius Seidel, of St. Louis, delivered an excellent address, in which he pointed out some of the reasons why the retail lumber business has suffered in comparison with other lines of business. Mr. Seidel's remarks were as follows:—

The subject of my address was assigned to me by the secretary and is not of my own choosing. However, it covers a broad spread. It demands: First, a diagnosis on what appears to be a very sick patient, and secondly, after the diagnosis is finished, asks for suggestions as to corrective treatment to bring the patient back to good health, with resultant happiness and long life.

Well, why does the retail lumber business suffer? Suffering comes after an ailment has taken hold of us. Unless in case of an accident, suffering is the aftermath of sickness long endured. Thus it is a foregone conclusion that if suffering there be, it was occasioned by errors of many years ago, not a few of which are easy to locate. For a nucleus let us turn the dial back about twenty-five years, to a time when white pine was king of woods and the carpenter was master of construction. That was the period when we were so ruddy with good health that we believed nothing could befall us. We lived in an era in which we simply sold lumber. The carpenter boss was the intermediary between the actual consumer and the retail dealer. Upon the carpenter evolved the promotion of lumber. His word "went" as an authority for the public on uses of lumber. No retail lumber merchant, generally speaking, professed to have a knowledge of building construction. Very few could read plans or make a study of them. The use of the correct grade was of little concern to the retailer, and he rarely traced an item to its ultimate use. He sent what was ordered —without a care. The demands of the home owner were not so exacting as now. The carpenter could sketch a building that "went" and satisfied the modest home-owner.

Everybody for Himself

The concern of the carpenter boss then was his own livelihood, and as there then were many more items on a building, which were commercial for lumber uses than there are now, both he and the retailer fared well. Foundation planks, then of lumber, are now of concrete. Posts and underpinning, then of cedar and oak, are now of cinder, gravel or crushed stone concrete. Cellar posts, then of lumber, are now brick or iron. Exposed stairways and outside porches have turned on lumber and are now built of substitute materials.

The failure to use a correct species of durable lumber for exposures has, furthermore, changed outside work to inclosed work inside the brick walls. Inside stairs and screened porches are fair illustrations of my thought. Perhaps custom has changed, but I claim custom and the present-day ways of building have also been largely influenced by faulty construction, causing fire hazard and, through the use of wrong species of wood, causing premature dry-rot and decay.

Studding, because not fireproof, has been dropped for expanded metal and wire partitions. Roof coverings have been changed from shingles to substitutes. Basement flooring was short-lived because of the failure to use a preservative, hence lost to lumber, gave way to cement, brick and asphalt. Out-door fences are now being built of wire, and garages and barns of metal or metal covering. Even benches are now constructed of tile products or concrete. These, in part, and many more symptoms, got into the system of the lumber business, with no effort whatever on our part to find an antidote. Every curtailment of lumber uses affected the carpenter boss and so from year to year fewer carpenters were boosting for lumber.

The New Booster

The newly created trade resulting from this state of affairs, viz., cement works, tile and sewer pipe, roofing paper, wallboard, etc., brought out competitors who are boosting for the substitute products. Every man, if he is an adept at his trade, can do his work well, becomes an enthusiast and sows the seed for his own future.

So we note that we had gotten away from the public, the ultimate and real user of any product. We had a feeling that we had no right to approach an owner directly to influence his preference for wood; it might offend the carpenter. He, the carpenter, was looking after our interest. We had a horror about seeing the architect; he might resent our suggestions as a reflection on his judgment as to the proper material to be used. The fact of the matter is that we did not mix with the public sufficiently to feel the pulse of progressive thought about building, and we are a far way off from it today.

Our methods of selling were, and still are, indirect. Instead of leading right up to a subject, we figured on the carpenter's protection, little realizing that his prominent position had been wrested from him and that the general contractor, engineer or architect had superseded him on the job. Less carpenter work for the mechanic meant a holding on by him of all he could get out of lumber for his work.

Saving of labor to reduce costs of lumber was not his concern, but it should have been ours. Carpenter work had risen from twenty-five cents and thirty cents to sixty-five cents an hour, thus putting lumber, when finally trimmed and prepared by hand, under an extreme handicap. He went the way of least resistance, and putting lumber in a more utilitarian shape was not even suggested by us—it was so much easier to sell it in the crude. We have thus forced higher ultimate costs on lumber and suffered defeat as a consequence.

A Comparison with Other Lines

We have failed to grasp the "big idea" that our business has become intensely scientific. Just for comparison, let me say that when brick for walls was found too absorbent, science made it possible to produce a vitrified brick that would shed water. When paving-bricks failed, the manufacturer produced a paver that would withstand heavy traffic. When it was discovered that a change in color schemes, or face effects, interested the public, the brick manufacturers surely did not consult the bricklayers first before acting, but proceeded to preserve their business and thereby hold the job for the merchant, too.

The use of iron and steel products has been expanded by preparing at the factory, and that with the modern machines, many articles that were formerly fitted or prepared on the building site. Only the final placing of iron is now done by the erector. Beams, girders, grills, sills, in fact, all similar articles, are measured in advance and delivery made at a building in finished condition. Are the foundry and steel works selfish in so doing? No, indeed, and by reducing costs they expanded the uses of all kinds of iron and steel products and made more jobs for the iron-working craft, too.

The plumber formerly had rolls of lead pipe and accessories delivered at the building and there prepared them. The plumbing supply houses today have their showrooms where the public can see the latest in fixtures. Material now comes in units. The plumber is an erector of these wares. Has the plumbing supply house hurt the plumber? Why, no, it has developed the plumber's business beyond the dreams of the most utopian mind in the business. The mechanic on the job is still working overtime and the best evidence to show that we love him is the fact that a monthly plumber's bill is considered a part of the legitimate overhead of a well-regulated home.

I might add more illustrations, but the foregoing should be convincing. Gentlemen, I repeat that in comparison with other lines, we have failed entirely to realize that our business has drifted from a purely selling counter to a scientific business, an intensely scientific business at that. Less business means more competition to secure what little is offered. We have, in consequence, depraved our business to meet a price, instead of elevating it to a scientific trade. We, as retailers, have not served the public well because we try to do business on too low an overhead.

Erroneous Service Ideas

With a flourish of printer's ink we advertise service. Wherein do you serve much better than of old? The purchase of a motor truck does not expand the use of lumber. It is simply a convenience for quicker delivery. Warehousing of high-grade lumber in sheds is not a service, but only the common sense thing to do in order to save yourself from a loss. Having telephones is not service in the sense of expanding the use of lumber, because there was a greater demand for lumber before the telephone existed. The telephone serves the customer as a means of getting more competition, but is not a promotion expander. After all, the service of the retail lumberman has been incidental.

Surfaced lumber has, perhaps, been the longest forward step. End-matched flooring, I take it, was introduced rather to get a larger percent. of uppers out of the wood than with a view of reducing the ultimate cost to the consumer, when laid.

Now, having set out causes and drawn comparisons with other lines, we will discuss a few remedies. Let us set aside entirely the thought of immediate gain or profit, for that has been the goal which has put us on the rocks. Rather let us view broadly the necessities for the economic and practical development of our business, even though we may not reap the resultant benefits thereof for many years.

Individual discernment in this direction fails of accomplishment: First, because the expense of an investment in promotion propaganda is too great for one man to bear where the entire trade benefits, and,

secondly, because many a progressive thought fails of fruition on account of the "knocker" who stamps it under foot, either through ignorance or for the sake of prejudice, or hate and envy.

The Lumber Patch-Quilt

The lumber business in its many ramifications is, as I have often said, still a patch-quilt of units. The question of "burden" is at the root of all our trouble. In figuring the benefits of lumber promotion, I have found it difficult to reach a foundation for cost distribution or assessment. Of course, the timber holder should be interested, but to what extent? If the timber is in possession of private owners, these do not, perhaps, as fully appreciate what we are up against as does the combined timber holder and sawmill operator. The wholesaler, as a distributor of stock only, cannot be expected to be as deeply involved in the subject as millman and retailer, since his investment is not as large, hence not so greatly affected. Because the retail yard is directly as much concerned as the sawmill, the conclusion that the burden is largely on mill operator and retail dealer lies very near.

When it comes to co-operative lumber promotion, the retailer has done nothing of a state or national scope. The retailer has accepted the paternal offerings of the sawmill associations and is almost wholly dependent upon them for the big work. Not until the National Lumber Manufacturers' Association developed authoritative data on stresses, did we have anything in our business that was of real benefit to the public.

We simply must look at our business more seriously, if we hope for better things in the future. That means greater thought and effort by the individual and his shouldering a greater share of the burden of cost. We all owe an obligation to our business, and if there is a supreme body to show the way to success, we must co-operate with that body.

The next remedy is the knowledge of costs. The distribution of expense in an efficiently conducted retail yard is the fundamental thing that spells success. Our very first consideration, and one that needs a more thorough understanding, is as to what constitutes overhead.

With a correct interpretation of cost, promotion of lumber will require its just recognition as part of the overhead of retailing. The sooner you open this new account on your ledger and take a delight in seeing the amount charged to it spreading, the sooner will you see the light. High-grade advertising is nothing else than promotion and properly belongs to a fixed expense of doing business. Putting your name before the public is identification only, it is not advertising. Attracting the public to your product, irrespective of the fact that that public now is a customer or may at any future time become one, is building wisely and is true promotion. It puts a sale "across the plate" for someone who sells lumber—although you may not be the "someone."

Selling Methods of Now-a-Days

Now, to sell lumber well requires a thorough knowledge of lumber, therefore do not expect of your salesman qualifications which you do not possess yourself. The world moves, and so should you if you want to stay in the retailing of lumber, although you do not have to make 25,000 miles in 24 hours to be in the running. The larger percent of the retail salesmen are untrained, that is, they are not versed in grades, have not the technical knowledge of woods and are put on the streets with limited commercial training. These are lumber's representatives and are supposed to make a "hit" with a prospect.

Gentlemen, I picture our future salesman in the retail business as quite a different man from our present employee. He must be trained to meet the demands of the hour. He must have a college education to begin with, a thorough manual training in wood construction, a course in architecture and engineering, a course in forestry and a course in inspection—commercial training—and salesmanship will follow in the wake. Gift of knowledge stands and impresses where gift of tongue alone fails.

It requires intelligence, education and thorough training to fascinate, to attract to you, and to win for you the respect and confidence of the public you serve. You can only dominate over brains by having a greater knowledge of a subject than has the man to whom you are talking. Our present salesmen have been trained in the "go-to-it" school, that is, "down to a price." If they are not money makers it is because they were not graduated in promotion work and trade building.

The larger cities can change this condition tomorrow if they care to, by engaging a disciplined body of authortative men. We can jointly well afford to have on our payroll, in fact, it will be imperative to do so, a competent architect and an engineer in an advisory and promotive capacity. Their duties would include visits to architects, structural engineers, real estate dealers, building commissioners, street commissioners, and others. In the interest of all the yards of a city they could also visit owners and lessees, in short, the public and ultimate users of lumber, for the purpose of influencing them in considering the use of wood. They would offer free service upon questions of best modes of construction and free data on advisable species of wood to use.

The ratio of efficient salesmen to inefficient is overwhelming. We must stand ready to get bigger men to evolve big ideas, for it's a bigger problem before us that we must solve, if we survive. We might have influenced many a man, who is now spending all he saved on his auto, to invest in a home. The auto dealers, however, have got the public to thinking that an auto is a first consideration and the home investment will keep. Renting, you know, is good everywhere, but buyers of homes are on the wane.

Our business having become more scientific and our stocks more diversified, I am prompted to say that we must pay a price for better shed labor. It is difficult to get an apprentice in the lumber business, because the future does not offer sufficient inducements. Skilled labor and intelligent workmen are commanding better salaries in other lines and lumber must do equally as well to get good help.

Getting Closer to the Public

If we are out to interest the public we must be prepared to offer a "store service" or intelligent presentation. That means getting away from retailing on the tonnage basis. Talk to the public so they will understand you. Give the consumer a price by the piece or per board. Take the time to make up a list that way and give it to the clerk and yard loader. He will like it better, too. The man in the trade understands board feet prices and per thousand quotations, but the public does not. The impression that lumber is high can always be traced to the small consumer, to whom you quoted, to illustrate: $35 per thousand when he wanted only one piece 2 x 4-12, worth 28 cents.

A trade school for our business, where employees can get an education that would better fit them for their positions, is an essential. I know our superintendent of public schools has introduced special training courses, fostered by and asked for by certain lines of business. Then why not we also? These lines of business, you understand, pay a large part of the expense, and this is what we must meet and can meet. State associations should long ago have encouraged this more, for there are enough educational institutions, even outside of the public schools of large cities, that we could select for the training of which I speak.

A school of instruction should be fostered by local, state and national asociations, to the end that our business be elevated and the public thereby better served. Just as soon as the heads of retail yards get away from detail and devote more time to policies, just so soon will we advance our trenches. Then, indeed, will we full appreciate progressive initative.

It is not many years back when we ridiculed the introduction of ready-cut lumber—probably because it came from the outside, namely, mail order concerns—but it has been proved and has justified itself, because many companies have since moved a peg further and are building sectional houses of all kinds. There must be a demand judging from the number engaged in the work, then why not fit yourselves to this evolution? No matter in what form it may be used, be careful to see that the use of wood is continued. We can sell ready-cut and sectional houses just as well as the other fellow, if not singly then by a co-operative move of several concerns. Building sectional houses is here "for keeps." These houses have been proved a success in Germany and England, where they are produced in a more ornate and superior type than in our country. It's a progressive departure, so why condemn it? Really, aren't we just a bit jealous because we could not read the future as well as the outsiders who beat us to it and got there first?

Benefiting by the Progress of Others

A closer scrutiny of ourselves, and a comparison of our methods with those of others who have been successful, would lead an unbiased mind to reason that the retailer of lumber who is constantly complaining of his competitors' methods is not efficient. Do not forget that the advertising of ready-cut lumber and sectional houses is helping you, because it is advertising wood construction. Then ask yourself the question, "How much am I chipping in on this asset to help further the sentiment for wood?" When it comes to advertising, therefore, our business needs to be so revamped that the story of the use of wood will be absorbed by the public through having it told in their language.

An Important Sale of Horses, Wagons, Sleighs, Etc.

The Imperial Munitions Board, Aviation Department, have instructed Mr. Walter Harland Smith, Toronto, to sell by auction at the Union Stock Yards, Toronto, their entire plant used in construction work. This includes 200 horses, 100 sets of harness, and 100 wagons, sleighs, etc. The sale will take place on September 17, 18, and 19—next Monday, Tuesday, and Wednesday.

Some Ideas in the Planing Mill

By G. H. O.

The reason the planing mill man does not make stock sash is because he can't compete with the methods in use in the large Western plants that specialize in this particular line of work, but I recently happened on a planing mill owner who is turning his large trade in Western-made sash to account and diverting a few extra dollars into his own pocket.

He buys the sash K.D., in carload lots, all of a two-light size, and has them piled in his storeroom, with each size in a different rack and each rack marked so there is no trouble in locating the right size. If an order comes in for a four or six-light sash, he takes the stiles and centre-bar and makes the necessary tenons for the bars, one tenon for four lights and two tenons for six lights, etc. Most of any kind of a freak window, two lights on the bottom and six on top, or other combinations, can be made from a two-light window.

After the window is put together it is cleaned up thoroughly, and cannot be distinguished from a sash made to order right in the shop—and that is what he charges for, a window made to order. Why not? He has put the sash together in a substantial manner—just the same kind of work he would have performed had he gotten out the stock—and if someone else can furnish the stock and machine the stiles and rails cheaper than he can that is nobody's business but his own.

This man also goes a step farther in his figuring, and buys most of his lumber dressed and kilned. Remember, he is getting out house finish, store fittings, etc., instead of furniture. He has been in business a long time and never had a drykiln. He figures that the cost of a kiln is large and the upkeep still larger, and, as he operates his shop with electric power, he can keep his shop and office warm in winter on the waste from his shop, and save buying the coal that would be necessary in operating a kiln.

In regard to the drying of lumber, he claims he can get more uniform results by letting someone who specializes in the work do it. When the lumber is shipped to him he places it in a dry shed and allows it to adjust itself to the natural conditions of the atmosphere, so that when it is worked up into interior fittings it stays put. As to buying the lumber already dressed, which, of course, applies principally to oak, chestnut, and whitewood, he claims it is generally dressed to a standard thickness anyway, so why not let someone else do it especially as the cost is much less than he can perform the same work for?

This idea seems to be in line with a gradual change that is taking place in all its branches. The progressive furniture manufacturer no longer makes his own tops, panels, backs; and drawer bottoms. He has found that the panel manufacturer can do a better job and do it cheaper than he can. His shop has become to a certain extent an assembly plant. The piano-maker no longer manufactures his own action, but devotes his energies and skill to the building of the case, letting some other specialist attend to the rest. This idea of specialization is found in use in all branches of manufacturing, and the planing mill man is the last one to adopt it.—The Wood-Worker.

Effect of High Speed on Band Saws Ably Discussed by An Expert

The following interesting and instructive article on "The Effect of High Speed on Band Saws" appeared in the August issue of the Disston Crucible:

While we know there are still quite a number of operators who advocate high speeds, our own experience and observation has clearly shown that the band mills that run their log band saws at a speed of about 8,000 feet per minute are obtaining better results, both in quantity and quality of output of lumber than those who run at speeds of 10,000 feet per minute or more.

This, of course, applies more strongly where the power is ample, the appliances in perfect order and alignment, and the saws are operated and taken care of by thoroughly competent sawers and filers.

It is, of course, well understood that excessive speed tends to extra vibration, no matter how firm the foundation of the mill or how thoroughly installed. When the saw is running at very high speed it naturally tends to the same vibration and waving motion that applies to highly-speeded belts, and it is a rare thing to see a straining device that is sensitive enough to compensate fully for the excessive vibration in the blades. Consequently, under the feed pressure, high-speeded band saws are more apt to deviate from a true line than those of a normal or moderate speed.

Quite a number of operators still hold to the idea that high speed means high capacity, but it does not always follow by any means, for unless the apparent excess elasticity occasioned by the high travel of the saws can be absolutely compensated for by extra-weighted and highly sensitive straining devices the feed must necessarily be reduced per revolution of the saw on a moderate speed to compensate for a reduction in speed.

To specify more plainly, take for an illustration a 50-foot band saw, making 200 revolutions per minute, which equals 10,000 feet If this saw were cutting continuously at the rate of 12 inches per revolution that would equal 200 feet of feed per minute. Our experience has shown that it is easier to maintain a feed of 14 inches on 180 revolutions of the same saw than it is to maintain a feed of 14 inches on 180 revolutions of the same saw than it is to maintain a feed of 12 inches on the 200 revolutions, and a very little figuring will show you that a rate of 14 inches feed on the 180 revolutions is greater than 12 inches on the 200 revolutions, to say nothing of the wear and tear on all machinery, belts, and saws, besides enabling the operators to produce better manufactured lumber.

This principle will hold good at a less speed than 8,000 feet per minute, and to those who have not gone into this point thoroughly, and are inclined to feel a little skeptical on the subject, we will mention mills where the practice of quick stopping of the band saws at saw changing time by sawing a few lines from a "cant" left on the carriage for that purpose. It will be noted that as the speed of the saw decreases the feed per revolution of saw is increased, and this, too, at a time when the saw is dull, and therefore in a poor condition to stand the higher rate, but this is made possible only by the absence of vibration in the blade.

Of course, it is understood that we never advocate a reduction of speed at the expense of leverages in driving and receiving pulleys, as that would be sacrificing power, but a decrease in the size of the driver or an increase in the size of the receiving pulley to bring about the desired reduction in speed of saw without reducing leverages of pulleys and traction belts is bound to give better results, all other conditions being up to a good standard.

U. S. Government Orders 2½ Cent Newsprint

A great deal of excitement has been caused among paper manufacturers in the United States by an order issued by the Secretary of War to the International Paper Company directing the company to furnish to the government printer 200 tons of newsprint paper in 48-in. rolls at a price of 2½ cents per pound. The International Paper Company, of course, are complying with the order, but have protested that it is unjust, as the price is not enough to give them any profit.

Retail Advertising That Pulls

The two great things to bear in mind in retail lumber advertising are attractive appearance, from a typographical point of view, and a strong appeal to the reader. It would be hard to improve upon the accompanying example of an advertisement, used by the Valley Lumber Company, Ltd., of Minnedosa. It catches the reader's eye easily and interests him unfailingly. It is brief enough not to be a burden to the reader, but contains a strong and direct appeal to him, both from a cost and a service point of view. Such advertising can be counted upon to pull:

A Good Year to Build a Home

It certainly is.

You may never see a better year.

You live just once, and each year that you delay building your GOOD home the less time you have to enjoy it.

Waiting for an ideal year is slow, tedious work—the ideal year you look for may never come.

This year is as good as any; better than many.

Prices for all farm products are HIGH. Lumber is comparatively cheap, probably cheaper than it will be again for some time to come.

Let Us Help You Plan a Good, Comfortable Home

at once, so you can get it up before cold weather.

We make plans to order and furnish them free with material.

The Valley Lumber Co., Ltd.

Geo. W. Bridgman, Manager — *Minnedosa*

A Well Designed Advertisement for a Retail Lumber Dealer

The Banker's Relation to the Lumber Industry

By Col. Rowland E. Harvey, of Everett, Wash.

I know something about the lumber industry, perhaps more than the average man of my age. I was born and reared in a country that produced a man who for years was the greatest single-handed lumberman in the whole world—Alexander Gibson, of New Brunswick, who, when I was about 10 years old, had a fleet of 57 ships carrying his manufactured product to Europe.

You may think that strikes are an institution of the present day only. I well remember when the stevedores of St. John struck for more pay. Mr. Gibson was finally located and introduced at the Labor Temple. In a few words he told the strikers that the spruce deals he was shipping cost him more than he was receiving for them in Liverpool, meaning a loss of much money that year. He insisted that he was paying good wages, and would bring men from the States to take the places of the strikers if they did not go on with their work, which he did, placing a large guaranty fund as a matter of good faith. Other lumbermen and the banks joined him, and outside men were brought in, while St. John labor fought and looked on.

After making considerable money in the lumber business, Gibson, being a democrat and free trader, thought he could compete with the pauper labor of Europe in the manufacture of cotton. He built a great plant and went at it. He ran the mill about sixteen months, when he was obliged to close down, and the bats have been building nests in that mill ever since. Mr. Gibson died comparatively a poor man.

My father was enaged more or less in getting out logs, ship timber, and knees, which were floated down the St. John River to St. John, where they were shipped to Europe. I have no doubt that some of the ships being sunk these days by the submarine contain some of these timbers and knees. About thirty-nine years ago I went to Minnesota, where I worked for years in the several departments of the lumber business, and finally came to Washington about fifteen years ago, when the lumbering industry was in its infancy here. I have, therefore, followed the lumber business across the continent. When I went to work in the pineries of Minnesota the lumber business was in its infancy in that state, as it was in Wisconsin and Michigan. I have seen those three states pretty well cleared up. While they are still cutting a lot of lumber in Minnesota, Wisconsin, Michigan, and even in old New Brunswick, at the same time Washington is to-day the great lumber-producing state. This state cut 4,500,000,000 feet last year. The number of shingles manufactured was 7,700,000,000. In 1910 we manufactured 10,108,000,000 shingles. The lumber business is 40.4 per cent. of the entire manufacturing business of the state; 18.7 per cent. of the population is employed in the industry and receives 59.5 per cent. of the total wages paid in the state.

Of the total taxes of the state for all purposes, 47.3 per cent. is paid by the lumber industry and those engaged in it.

Aside from agriculture the lumber industry is three times greater than all other industries combined.

As a direct result of the work of the malcontent, street corner blatherskite, and agitator, labor has lost on an average of $4,000,000 a year for the last ten years in the lumber industry alone. This, added to a larger loss to the logger and manufacturer, constitutes by far the greatest economic waste in the state.

Including federal, state, and privately owned merchantable timber still standing in this state, there are 392,000,000,000 feet board measure. At the rate we are cutting to-day, figuring the natural increase, it will take about 100 years to clean it up. To assist in conserving this, the state's greatest resource, we should be reasonable in taxing standing timber. Exorbitant taxes on timber, which is only one crop, means overproduction, no profits, and the leaving of billions of feet of the poorer grades in the woods to be burned. Many holders of timber are compelled prematurely to slaughter their timber in order to save some of the money invested. In making this statement, gentlemen, I wish you to know that I do not own an acre of standing timber in the state.

If we could induce Congress to forget politics long enough to enact reasonable laws for the development of our water-powers it would mean cheaper manufacturing, and consequently cheaper lumber and nitrogen for the farmer. Congress should forget these hair-brained, self-appointed "conservators of the public interest," whose chief purpose is to keep their names before the public.

The lumberman has been the brave, sturdy, optimistic pioneer who blazed the trail and swamped out the tote-road over which the banker, the merchant, and all other lines came into the wilderness and began to develop a new country. He has always been at the front first, and by herculean effort and indomitable energy overcame every obstacle. His closest ally and about the first to join him at the front has been the banker. The timorous merchant, so often afraid to stand for his convictions, is sometimes ahead of the railroad, but the human parasite—the agitator—waits for comfortable, easy transportation—the railroad.

This rough, hardy life and frontier command accounts for the fact that every lumberman considers himself a major-general. Have you not noticed that there are no privates; that they are all leaders—generals?

This characteristic accounts for their inability to get together for the common good of the business and community. They have a hard time deciding who is to be king, and in the meantime combinations are put up, to the hurt of everybody.

Gentlemen, have you not noticed the great need of co-operation among lumbermen How often you have seen them shipping out their product for less than cost, and you worried to death about the loan you made? All for the lack of two things—honest co-operation and courage enough to sell the manufactured article.

Why should the lumbermen of this state go through all the agony and grief of producing the best article in America and then permit an irresponsible broker, without a dollar invested, to call them on the phone and put a price on the goods? This irresponsible broker is always beating down prices, and is a menace to the business.

The general run of our lumbermen may be generals, but they surely are not salesmen-merchants.

The environment of the lumberman, the big, broad life he has lived, makes him a general, but, being equal in rank, they don't like to take suggestions from one another.

Now, here is what I am getting at: The banker is really a partner, because he furnishes the money in most cases, and he is something of a general himself, and the lumberman will listen to him. That is why I am pointing out these shortsighted policies in the hope that you gentlemen will use your good offices in helping to correct these defects.

There is another important matter where the banker can help the lumberman and the whole state and nation. We are at war; the government needs ships. Washington has the best timber in the world for shipbuilding, but we must have steel cable to haul this timber to the mill. The government is taking practically all the cable made, and the logger can't get logs without steel cable. Can you not help us bring this shortsighted policy to the attention of Josephus Daniels, who, we understand, is grabbing all the steel cable? Remember, he needs ships as badly as submarine nets.

There is a common enemy to labor, the banker, business man, lumberman, and society in general, and that is the agitator under whatever name, who, under the guise of "free speech," is traveling about, preaching arson, murder, and treason.

Our courts and juries are impotent when it comes to prosecuting organized crime. There should be laws enacted defining the difference between "free speech" and treason or free license to burn and kill. In other words, "free speech" should not be made the goat to serve the arson and murder munger.

Co-operation and organization, together with "eternal vigilance," means liberty to-day.

U. S. Industry Shipments Exceed Production

Statistics compiled by the National Lumber Manufacturers' Association of the United States, show that during the twelve months ending July 31 the mills reporting to the Association cut 15,602,000,000 feet of lumber and shipped 15,741,000,000 feet, or 8.9 per cent. more than production. Shipments the first seven months of this year were 7.7 per cent. more than last year, with no increase in cut. During July this year 732 mills in all parts of the country and operating in all kinds of timber, cut 1,389,000,000 feet and shipped 1,566,000,000 feet, or 12.7 per cent. more than production. The cut in July this year was 1.3 per cent. less than July last year, with shipments 19.6 per cent. greater. During the four weeks just closed 320 southern and western mills have cut 606,000,000 feet of lumber, shipped 778,000,000 feet, and accepted orders for 613,000,000 feet.

Newsprint Production Increasing

The Canadian and United States production of newsprint paper during 1917 is estimated to be 1,940,000 tons, as compared with 1,816,000 tons total for 1916 and 1,644,000 tons for 1915. The actual production up to July 31 indicates that the estimated production for 1917 will be reached, unless there is some further interference in manufacture during the remainder of the year due to labor shortage.

According to the official statement of receipts and expenditures of the Province of Quebec for the fiscal year ending June 30 last, the receipts from lands and forests were $1,753,624, while the expenditure was $361,150.

The British Board of Trade has taken possession of all stocks in Great Britain of mahogany and American walnut lumber in logs, planks and boards containing more than 5,000 feet.

A meeting of sawmill employees was held recently at Vancouver, in the Labor Temple, to discuss a proposal for organizing the employees in the industry. Further meetings are expected to be held.

Cost Accounting for Wooden Box Plants

National Association of Box Manufacturers Adopt System Worked Out by Special Committee and Recommend It for Use

The wooden box industry, like a great many other important industries, has never had a uniform system for cost finding and cost accounting. To know what it costs to produce a finished product, not only in its complete form, but the cost of each operation which goes to make up the completed article, is just as necessary and essential to every manufacturer as it is to keep a factory supplied with raw materials and a sufficient amount of labor to produce a finished product. The conditions prevailing in the wooden box industry have changed rapidly during the past few years, and still greater changes will take place during the succeeding years. All raw materials from which wooden boxes are constructed have inceased in value; labor is demanding more money, less hours, and an apparent shortage prevails, as well as inefficiency.

It is a recognized fact in all business, particularly those that are well established through the efforts of their respective associations, that one of the most important factors confronting the business man of to-day is the keeping of a cost record in such a manner as will show him in every detail what it is costing to produce. In order to compete intelligently with their special line of production they must know what it costs to produce, and this cost of production should be so segregated that each department will bear its proper proportion of the cost, and that the sales will, of necessity, show the result of such cost finding and cost keeping. Further, the man who is operating his business without any idea of what it is costing to produce a certain article is, generally speaking, the most vicious competition existing.

Every man who is producing a product of a manufactured nature has a right to expect a legitimate profit from his efforts, and it is the man who does not keep any record of costs that sets the mark of ridiculous competition. Unless each manufacturer knows what it costs to do certain things he is not in a position to know what a legitimate selling profit is. With all of these facts confronting the wooden box industry, the National Association of Box Manufacturers saw the imperative necessity of developing some system for cost finding and accounting, simple in construction, easy of application, adaptable for any kind of a wooden box manufacturing plant, yet accurate, and which when installed and in operation, would place the manufacturer in a position to know all those details which in the past have been a matter of guesswork.

To bring this about, a committee was appointed to lay the foundation for a cost plan. This committee finally submitted a cost chart, from which a detailed cost accounting scheme could be made adaptable for the wooden box industry. This cost chart was approved and the subject referred back to the committee to work out all the details necessary to place it before the manufacturers in an understandable and operative form. The committee completed the work and the details for the cost finding and cost accounting plan to be used by the wooden box industry, and as covered by the chart were approved by the Department of Commerce.

The authorized and approved basis for cost finding and cost accounting adopted by the National Association of Box Manufacturers is now submitted for the use of the wooden box industry of the United States. The system is as follows:

It is necessary to take each item separately and analyze in detail the method suggested by which costs are to be determined; also suggestions for accounting, after the individual costs have been secured.

It was held to be essential that a basis should be established in which the factors of costs would be treated, as follows:

Materials charged to the job at cost, and in case of lumber, which is the principal item under this head, carrying charges are to be added. The plan, which is in almost universal practice, is to charge the box factory with the quantity of each grade and kind of lumber delivered to it from day to day, and to compute the number of feet of each grade and kind contained in the product. The difference between these quantities represents waste.

For a unmber of reasons it is impracticable to measure the lumber for each job, because this would involve the handling and measurement of each piece, and consequently entail a prohibitive expense, besides retarding production. Therefore, the usual proceeding of requisitioning exact quantities of material from stores must be dismissed, so far as the production order or job is concerned. The same thing is true of nails, glue, printing inks, and similar materials.

Waste

Waste, as before stated, is charged to the job by percentages derived from statistics which show the results of working various grades and kinds of lumber. It has been customary to use only one percentage for all grades and kinds, but it cannot be too strongly urged to segregate these elements, especially in factories where the variety of woods includes cottonwood, pine, birch, and gum, all of which possess different characteristics.

The percetage of waste is commonly spoken of as being related to the quantity of raw material out of which it develops. The manufacturer must be careful, however, to distinguish between the percentage so arrived at and its application to his product, in which he recognizes only the net feet from which the waste has already been eliminated.

Thus, as an illustration, the following example might be cited:

Material delivered to the factory and used	1,000 feet
100 boxes manufactured, contain	800 feet
Material wasted	200 feet

Percentage of waste, 20 per cent.

Percentage of material in product, 80 per cent.

We will now reverse the proceeding by beginning with the known quantity of material in 100 boxes, and show that the addition of that percentage to the finished feet will not correspond with the number of feet used:

100 boxes contain	800 feet
Add waste—20 per cent.	100 feet
Total material accounted for in cost	900 feet

This is obviously wrong, but in order to dispel any doubt regarding this point, the above illustration is cited. As a standard method of figuring waste into finished product, the following is recommended:

100 boxes contain ..... 800 feet

This is equivalent to 80 per cent. of the amount of lumber required;

Therefore, divide 800 feet by .80, and the result is the amount of lumber required, or 1,000 feet.

Productive Labor

Productive labor charged to the job, as reported from the several production centres throughout the factory. A production centre may be a single workman working by hand, or a single machine served by one or more hands, or a train of machines, each of which performs only a part of an operation, and each machine in the train is dependent upon the other for its output. To illustrate this, the operation of sawing requires two machines served by three hands. The cross-cutting machines saw the pieces to the proper length, while the ripping

* Reprinted from Barrel and Box.

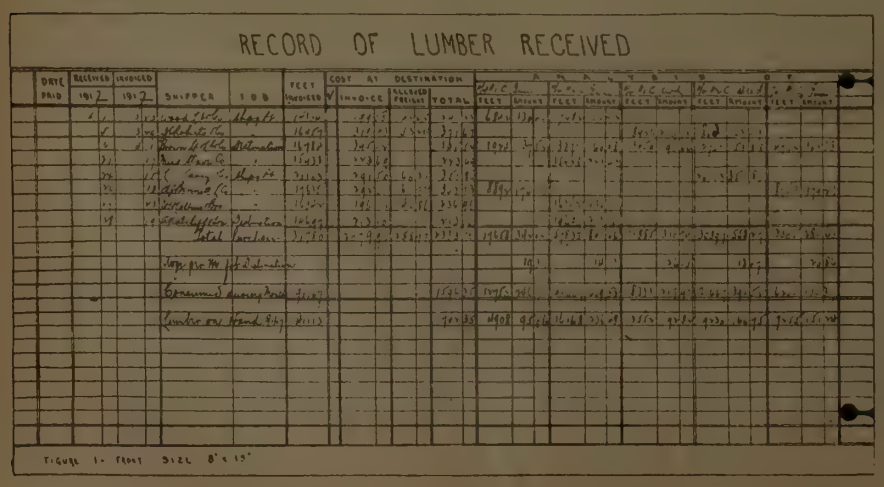

RECORD OF LUMBER RECEIVED

FIGURE 1- FRONT SIZE 8' x 13"

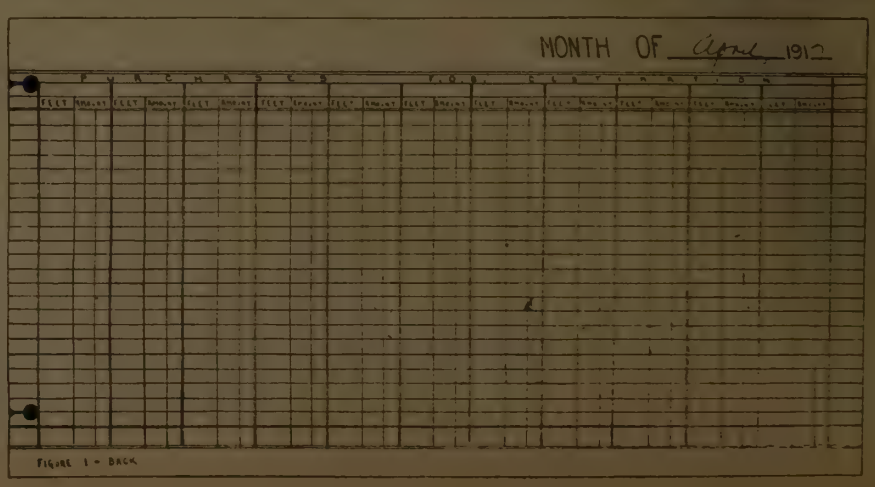

MONTH OF April 1912

FIGURE 1 - BACK

machine takes the pieces so cut and rips them to the required width for each job.

The hourly rate for each production centre is made of the combined rates of the several workmen engaged at it. One of the principal advantages of this plan is that it reduces the number of reports to be handled to a minimum, and places the responsibility of reporting upon the most intelligent workman in each group. In a factory where a great many orders are handled each day, and changes from one job to another are correspondingly frequent, it reduces the pobability of error to the minimum.

Non-Productive Labor

Non-productive labor is a term frequently misunderstood. For the purposes of this plan it is all that labor which is absolutely necessary in the conduct of a factory, and in the manufacture of boxes, but which cannot be definitely measured against each production order, and which must, therefore, be added as an item of overhead or burden expense. Its treatment on the payroll is considered in another paragraph.

Overhead or Burden Expense

Overhead or burden expense is of two kinds, namely, factory burden, which consists of items belonging directly to factory operations, and general overhead, which is expense not directly connected with the factory. Both of these classes of expense in the box manufacturing industry should be absorbed in the process of manufacture, as a percentage of productive labor. There are several reasons for this method of application of overhead charges. It is not very unusual to apply factory burden in this manner, and the method commends itself particularly—first, on account of its simplicity; and second, because the results obtained are as equitable as under any other method. Another reason may be added, and that is that it is not always practicable to allocate all charges entering into this class of expense to the proper departments. As an illustration, the charge for power which constitutes one of the principal items under this head, may be cited. In most box factories power is generated in their individual power plant and transmitted through the factory by way of one main-line shaft. From this main line the several departments are furnished with the necessary power. Numerous attempts have been made to determine the proper charge to each department under these circumstances, but no satisfactory results have as yet been attained. It would seem, then, that, inasmuch as this item cannot be properly analyzed, and that so far as the consumption of power against any item of product is concerned, it rests more chiefly upon the length of time that a product consumes of the entire manufacturing facilities than upon any other factor.

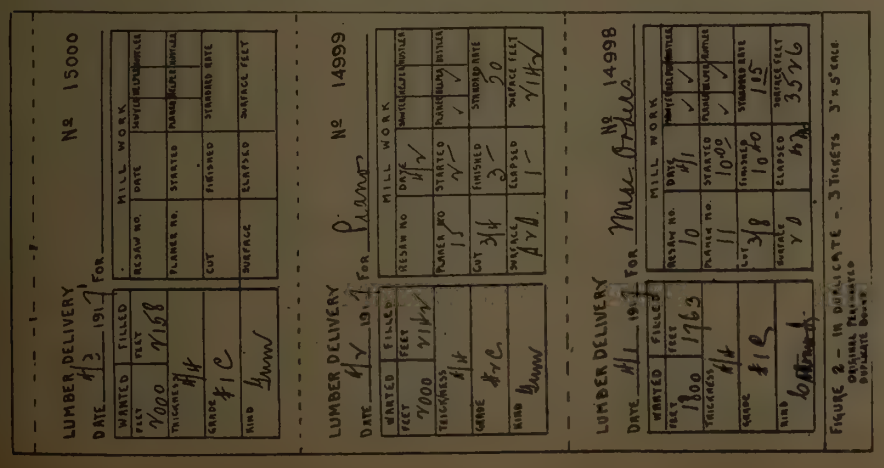
This might be said to be equally true of the other charges constituting factory burden. In proportion to the whole there is very little hand labor in the modern box factory, and the application of an overhead charge against this hand labor, which includes a certain proportion of the power, will not go very far wrong, when compared with the results where a more careful analysis is made.

General Overhead or Administrative Expense

General overhead or administrative expense (as it is called in the accompanying illustration of accounts) is very frequently applied to costs as a percentage of the total factory costs, which include material, productive labor, and factory burden.

In this instance the recommendation is for applying it as a percentage of productive labor.

Material in the box factory is a very variable factor, and should not be used to carry any portion of the overhead. except such as has been already designated as carrying charges on lumber. To illustrate this: A package of large dimensions may require very little labor in its production, while one of small dimensions may entail a great deal of labor. It would be unfair to users of large boxes in that event to allocate burden on a basis of which material is a part. Under these circumstances the user of small packages would not bear the proportion which he should. By applying overhead in the way recommended it



is intended to control the value of box factory products more by the amount of labor that has to be performed upon a given box than by the amount of material passing through the factory, under certain circumstances the quantity of material may vary widely and the cost of labor remain practical stationary.

In the following paragraphs a brief explanation is given of how charges and credits are to be made to the various operating accounts which are illustrated.

Property and financial accounts have not been considered here, because they do not require any special treatment, so far as the principles of cost keeping are concerned.

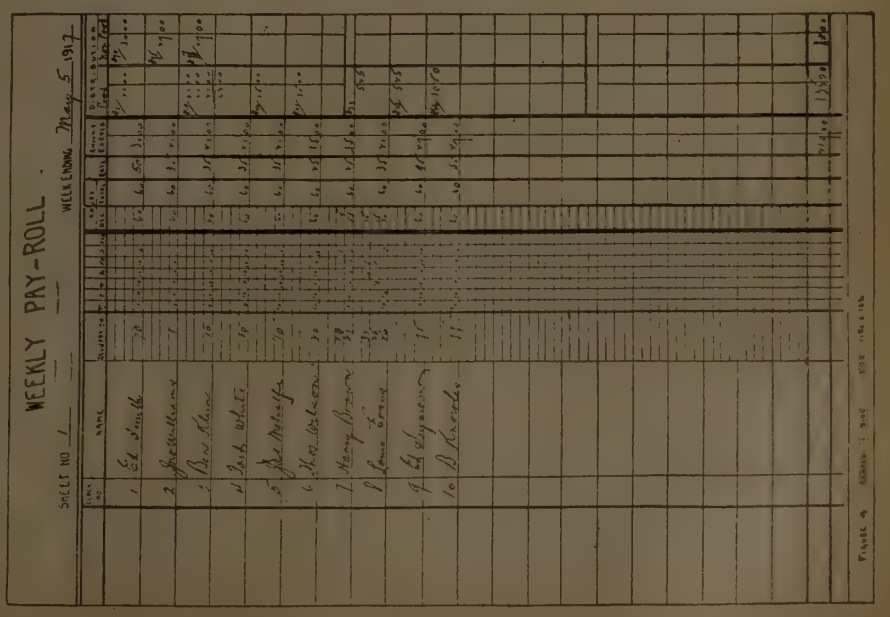
The purpose of keeping the operating accounts as outlined in these pages is to establish a control over the cost records. Into these accounts we will carry entries showing the amounts which have been spent for material, labor, and expense, and the extent to which these have been consumed in the month's operations. In the cost records we will attempt to proportion these outlays to the jobs which have passed through the factory. By a comparison of the two records we shall see how nearly we have accomplished our purpose. If at first we do not succeed in the complete reconciliation of the two sets of figures we shall have at least determined wherein the differences occur, and set about to remedy the conditions which are at fault.

Lumber Account

Upon the careful and accurate treatment of this accounts depends the value of the cost-keeping efforts. If the charges into the account are not based upon careful measurement, and the deliveries from the yard upon at least a very reliable estimate by loads, then there is not much promise of success. These are essentials which should not be overlooked under any circumstances.

The manufacturers who have undertaken such a program, and as a result are able to determine their loss or gain at the close of each month, have felt amply repaid for the additional expense for clerical help which a careful analysis of this account and those described in the following pages has occasioned.

Charges to the lumber account are made at the close of each month from the lumber purchase journal. This record is illustrated in Fig. 1. The sheet as drawn shows only five columns for the analysis of pur-



chases. Where this is not ample, then the reverse side of the sheet may be filled entirely with similar columns and used in folio form. Or, if an even more elaborate analysis is desired, a separate sheet for each kind of lumber may be used throughout the month, and the totals from each recapitulated at the end of the month for journalizing. It will be seen to possess such flexibility as to make it adaptable under any conditions.

The journal entry from the lumber purchase journal would appear as follows:

Debit: Lumber	$2,338.70	
Credit: Accounts payable		$2.079.93
Accrued feight		258.77

Cost of 131,780 feet of lumber during February.

No entry has been made in Fig. 1 for freight on shipments purchased f.o.b. destination. Inasmuch as these charges are a deduction against the invoice of the shipper they should be charged to the shipper's account. Freight charges on shipments purchased f.o.b. shipping point should be entered against the respective shipment in this record as soon as they are ascertainable, and, when paid, be charged to the "Accrued Freight Account."

The entries for lumber consumed and lumber on hand need not be carried into this record, but may be transcribed to a separate sheet, which may be made to carry a detailed history of the lumber account for an entire year.

A sheet for this purpose should have the following headings:

JANUARY, 1917.

Kind. Thickness. Grade. Invty. 1st. Purchased. Consumed. Invty. 31st.
Ft. cost. Ft. cost. Ft. cost ft. Cost per M.

and continued across the page until the entire year has been recorded.

Entries are made into the lumber purchase journal in chronological order of receipt. Another word might be added regarding the distribution of freight charges into the analysis of purchase columns. The simplest plan is to ascertain the cost of freight charges per 1,000 feet, and to distribute this to the several items in an invoice in the porportion which each item bears to the whole.

Having provided a suitable record for the history of lumber purchases, we are next concerned about the proper reporting for the disposition of this material.

The form shown in Fig. 2 has been employed for this purpose with success. It is issued by the yard foreman in duplicate. The original, which is perforated, is given to the tally-man; the carbon copy remains in the book to facilitate tracing in the event of the original being lost. The yard foreman fills in the approximate quantity wanted, description of the lumber, where to be delivered, and the mill work to be performed. The tally-man inserts the number of feet loaded, and places it in a pocket provided on the lumber wagon for this purpose. When work is commenced in the mill on this load of lumber the machine operator fills in the time of starting, and, when finished, the time at which the work was completed. He then passes the ticket on to the box factory, where these are picked up daily by a clerk, who at the same time marks the truck-load or parcel of mill-worked lumber with the thickness, grade, and kind. This facilitates the proper reporting by the sawyer of the description of lumber worked. These tickets, upon reaching the office, are sorted first, as to thickness, grade, and kind, for the purpose of making the monthly report of lumber consumed, and then sorted as to the different kinds of millwork done, for the purpose of establishing a cost on the several operations which have taken place.

Entry is made at the close of the month for the number of feet of each thickness, grade, and kind of lumber consumed. The prices to be applied to this consumption are arrived at from detailed history of the lumber account.

After these entries have been made, unless other sales have taken place which have not been gone into in this paper, because the treatment of these would be very similar, the balance in the lumber account should show the total number of feet of lumber on hand and its value.

How accurately this work has been done can be determined at the time of taking a physical inventory. After having this plan in operation for two or three months it might be well to take a physical inventory to verify the book figures, and, if the results are not entirely satisfactory, to repeat the same proceeding several months later. It would be a safe prediction, however, that after everyone who has had any part in the reporting of lumber received and lumber delivered has become thoroughly accustomed to its use, the necessity for a physical inventory will not present itself more frequently than once a year.

In the interim the manufacturer will have had the advantage of keeping thoroughly posted on the condition of his lumber stocks from records kept in the office, and it will not be necessary for him to depend upon the opinion of the yard foremen.

Lumber Yard Expense

This account is to comprise all of those charges which enter into the maintenance of a lumber yard, and consists of labor consumed in unloading and piling and delivering to box factory, tram, and foundation repairs, repairs to other equipment used, and the necessary fixed charges.

Under the heading of fixed charges the principal items would be rent of ground occupied by the yard, or its equivalent, and insurance on lumber.

All of these items are necessary expenses which should constitute an additional item of cost against lumber. For the purpose of simplifying the pricing of lumber as much as possible, however, these items of expense have been eliminated from the lumber account. Another purpose of separating this expense from the prime cost of lumber at the plant is to determine the asset value, or inventory value, of the carrying charges on the stock of lumber remaining on hand. The cost per 1,000 feet is arrived at by dividing the total expense for the month by the number of feet purchased. The account is credited at the end of the month at the rate so arrived at, multiplied by the number of feet consumed. In the succeeding month the balance carried over is to be added to the monthly expense and the total divided by the number of feet on hand at the beginning of the month, plus the number of feet purchased. This establishes a new rate for that month's consumption. This method is particularly adaptable to plants where the receipt of lumber is heavier during some months than in others. As an illustration: A plant located in Chicago receives most of its lumber from points on the Great Lakes during the summer. It would be unfair to burden those months with that expense. Under the plan suggested, the expense would not be absorbed until all the lumber had been consumed, which seems to be more equitable. The amount chargeable to the monthly operatons is charged to the box account.

Planing Mill Account

The next step through which the material passes is that of millwork. It is therefore desirable to know how much expense has been incurred in this operation. At the close of the month the charges made to this account are transferred to the box manufacturing account. Using the number of feet of lumber consumed, the entry will show the cost of resawing and surfacing lumber.

In the paragraph on lumber the suggestion was made to keep a record of the different kinds of millwork done. the quantities produced in the several operations, and the time consumed on each. Where this has been done, a cost on the different kinds of millwork can be arrived at.

To illustrate this the following hypothetical case is shown:

Work done.....	429,648 ft. resawed 3/8 in. and S2S in 286 hours	
	154,714 ft. S1S to 7/8 in. in 80 2/3 hours	
	584,362 ft.	
Cost of labor in mill	$340.62	
Cost of overhead	320.62	equals 94.1 per cent.
Total	$661.24	
286 hours resawer and helper at 55c per hour		$157.30
286 hours planer and helper at 50c per hour		143.00
Total		$300.30
94.1 per cent. overhead		$282.68
Cost of resawing and surfacing 429,648 ft.		582.98
Cost per M., $1.36.		
80 2/3 hours planer and helper at 50c		$40.32
94.1 per cent. overhead		37.94
Cost of surfacing 154,714 ft.		$ 76.26
Cost per M., 50c.		

Charge to Box Account

429,648 ft. at $1.36 per M.	$582.98
154,714 ft. at $0.50 per M.	78.26
Mill work done in January	$661.24

Supplies

This account should be charged with the purchase of all those supplies which become a tangible part of the product. This would include nails, glue, fasteners, ink, twine, shingle bands, trimmings, and similar items. The account would be credited at the end of each month with the consumption of these materials. In a plant where the variety of articles used is not too great a columnar record similar to that shown in Fig. 1 may be used for the classification of these different materials and the totals journalized at the end of the month. Where this is found to be impracticable, the use of a stores record card (Fig. 3) is recommended. By this means a record may be kept of each article ordered, placed in transit, received and consumed. Through an oversight, the price column was omitted, but plenty of space will be found in the "Received" column. Entries are made into the "Ordered" column at the time of placing the order. Into the "In Transit" column when shippping notice is received. Entries to the "Received" column

are made from the invoice at the time of passing it for payment, and to the "Consumed" column from the daily reports of the storekeeper, or other employee, in whose custody these materials are kept. At the end of each month the totals of every article used are drawn from the "Consumed" column, and are extended at the prices shown on the stores record card.

When these transactions have been faithfully recorded, and the total debits and credits posted to the supplies account, the balance then remaining will represent the value of materials on hand. By drawing the balances from the stores record cards at the close of any month the total so arrived at should equal the balance in the supplies account.

Pay Roll Account

Charges are posted to this account at the close of each pay period, whether weekly, bi-weekly, semi-monthly, or otherwise, and the total represents the sum of all money expended for wages during the month.

Where a weekly payroll exists there is invariably a portion of the week which belongs in one month, and the remaining in the succeeding month. It is necessary that the operating accounts be charged with the amount of labor accrued during each calendar month, so that this item of cost may be in proportion with the items of expense and revenue which are readily ascertainable by periods of a calendar month. For this reason it is necessary to make the labor distribution for a like period.

In Fig. 4 a form of payroll sheet is illustrated which lends itself readily to a division between productive labor, non-productive labor, lumber yard expense, planing mill, power, teaming, and such other departments as are maintained.

Where the terms "Productive Labor" and "Non-Productive Labor" are used they refer exclusively to box factory labor. It will be seen that four spaces are provided for each name on the payroll, in which the several classifications might be made. If the payroll is a weekly one, this distribution should be completed at the close of each pay period in the columns provided at the right hand side of the page. The recapitulation of the totals so established will provide the information for the journal entry by which the payroll account is credited and the various operating accounts charged.

For the last pay period of the month, when it does not end simultaneously with the month, two distributions are necessary—one for the time up to and including the last day of the month, and one for the number of days beyond that date.

That part of the pay which runs into the succeeding month is not to be journalized until the books for the previous month are closed. The balance then remaining in the account will represent that part of the month's wages which was not paid until the succeeding month, and will stand as a liability upon the books.

(To be continued.)

Canadian Forester Joins U. S. Engineers

Mr. W. N. Miller, formerly of the Faculty of Forestry at the University of Toronto, recently enlisted with the United States army and was assigned to the position of captain of Company A, 10th Engineers, United States National Army. In a letter received from Capt. Miller, he states that he is about to leave for France in a few days, with the American Expeditionary Force and that, along with several regiments of pioneer troops, they are to prepare materials for docks, warehouses, railroads, and cantonments for the American troops at once, and that the order calls for aproximately 140,000,000 feet B.M. of materials of all kinds. Apparently, therefore, the engineers of this expedition will have a substantial task ahead of them. Capt. Millar's extensive experience in forestry work, both in the United States and Canada, will be of great practical value to him in his new work.

The entire equipment for the Tenth Engineers (Forest) was purchased in less than thirty days, and includes sawmills (complete in every detail), tractors, trucks, log wagons, trailers, miles of logging railroad steel, log cars, electric light plants, miles of piping, and tons of supplies. The mills that are to be taken to France are of three types: (1) 40,000-foot capacity, (2) 15,000-foot capacity, and (3) 5,000-foot capacity. They are practical, serviceable, compact. The idea, it must be borne in mind, is to get lumber at all sacrifice, and the mills have, therefore, not been built along lines of economy.

The largest type will have a ten-hour capacity of 20,000 feet; however, these mills are to be run double shift. They are of the rotary type, with rope transmission, equipped with an edger and two cut-off saws. They are as strong as can be made, yet retaining the portable features.

The second, or intermediate sized mills, have portable boiler, with engine mounted on top. They will be capable of cutting 15,000 feet in ten hours.

The smallest type of mill to be used will be capable of cutting 5,000 to 6,000 feet. It is claimed that these little shavers can be set in ten minutes and changed in twenty minutes. They will follow the cutting.

Trade Ethics in Millwork Distribution

By L. C. Boyle*

The wholesaler owes an unquestioned duty to the retailer. The retailer also is under an obligation towards his wholesale associate. In its final analysis both interests are bound by immutable ties.

1. Dealers' Co-operation.—Every dealer should be a member of his regional association, and this that he may the better improve his merchandising methods and educate himself for more efficient public service.

In addition to the larger co-operation afforded through state associations, every community should have its local organization. Elbow-touch among competitors tends to eliminate unfair trade practices, and, above all, constructive opportunity is thereby given to study not alone the wholesale market, but the service overhead. Accurate knowledge and general understanding of cost is the legal route to fair prices and market stability. Uniform methods of cost accounting are as essential to the retailer as to the manufacturer; the uninformed dealer is, as a rule, a price-cutter.

II. Wholesalers' Co-operation.—If it is important for the dealers to associate for the more efficient study of their trade problems there is far greater need of co-operation among manufacturers and jobbers. Elimination of waste in manufacturing and distribution processes can be achieved solely through organization. The wholesaler who does not recognize this fact not only stands in his own light, but, in truth, throws a sinister shadow on any effort to relieve the industry of its economic errors.

In addition, if both branches were constructively organized, legitimate opportunity would develop for frank and open discussion touching such subjects as "trade ethics." The law's prohibition in no wise seeks to obstruct that form of co-operation which tends to overcome industrial handicaps fairly. The law, however, does inhibit the artificial result achieved by agreement, where the purpose is to restrain or monopolize trade channels. Individual initiative must be left free, but the understanding of competitors can be enlarged as the result of co-operative contact. Through lack of industrial co-ordination national wealth has been shamelessly wasted. Hereafter the vague excuse of the law's menace will not justify waste and disorganization. The spirit of the hour is constructive. Price-fixing is destructive, as it in no wise adds economic efficiency. Knowledge of industrial facts, however, is essential if we are to get in line with the nation's forward movement. To accomplish this result we must study the problem jointly.

Wholesaler Deserves Dealer's Co-operation

III. The Duty of the Retailer.—The dealer should recognize the legitimate wholesale millwork distributor as the source of his supplies. Broadly speaking, the right solution of this phase will solve much of the trade difficulty. If the retail merchant expects fair trade dealing from his wholesale ally he must, in return, manifest a reciprocal attitude. There is at the present time a growing disposition on the part of the dealers in some sections to unite in co-operative buying schemes as to millwork products. The movement is not justified on the ground of economic buying. This new departure is the converse of the claim of the mail order house in its drive for the dealer's trade. Those who have given close thought to the mail order problem are convinced that in legitimate competition such concerns cannot ultimately win out as against the local retailer, and this because of the basic economic elements involved. As to co-operative buying, however, aside from the question as to the wisdom of the course, production, assembling and distribution cost must be as great in this new scheme as in the well-ordered process of long-established and modern plants. The new plan may make a surface showing by living on its own fat for a while (stock sale money derived from the retailers), but ultimately the basic element of cost will demonstrate the fallacy of the claimed advantage.

If the scheme takes root and spreads, the result is bound to be disaster to retail interests, and this because wholesale millwork operators will be driven to direct distribution.

Once this entering wedge is adopted as a trade necessity the mail order method will find lodgment in every avenue of wholesale distribution, because of the law of self-preservation. The public will not be benefited, because of the added cost of distribution, whereas trade interests as they now stand and are recognized will be fatally disturbed. Surely the better course is an intelligent grasp of the problem by the millwork and retail interests. This end can be attained solely through the co-operative spirit.

Why should not the two interests come in closer and more sympathetic contact? The law in no wise prohibits such a course when the purpose is not to interfere with trade channels. Both classes, in a general sense, are cursed with the bad habit of bickering, fault-finding, crimination, and recrimination. We can get nowhere by this method. The fact is, the whole problem is one of mental attitude.

Let's cut out the small and narrow way and adopt the broad and helpful course. In other words, the square deal will settle every dif-

* Continued from previous issue.

ference. To me it seems the very limit of folly for the dealers, directly or indirectly, to go into the wholesale business. By such a course the competitive element in both fields will be accentuated; the dealer in the wholesale market, the wholesaler in the dealer's market. We need less, not more, competition. If wholesaler and dealer would approach each other's problem with open minds, error and injustice would disappear. Have a committee of dealers study the market problem of the the manufacturers and jobbers. Also let the manufacturers and jobbers understand more fully the dealer's problem. If both sides were actuated by the right spirit, every tangle would unravel, and this without the illegal trade agreement or understanding.

In making these suggestions I am quite sure that my retail friends, who are in large measure also my clients, will understand that I am actuated by no selfish motive, but am trying to serve a constructive purpose.

IV. The Wholesaler's Duty.—The wholesaler should recognize the dealer as his natural ally in distributing mill work to the consumer. In addition to the basic principle suggested, the wholesaler should realize that in its ultimate analysis the growth of mail order methods holds as subtle a menace to the wholesale interests as to the recognized retail distribution. Herein the public is to be considered. It is up to the dealer to justify his cause by efficient, economic, and up-to-date merchandising methods. The mail order houses are expert advertisers. Quality and service considered, however, the local dealer gives more value for the money than does the mail order concern. Also he is on the job to meet every need; he knows the meaning of grades and has trade character. It is up to the dealers to unite and educate the buyers. Advertise. In this effort the wholesaler should aid in every legitimate way possible. He should support, not weaken, his co-worker. The two branches have, in a sense, partnership interest; that which cripples one weakens the other.

V. Stock.—As to "stock," the problem is not complicated. The legitimate and economic method of distribution is through the dealer. The element of barter is the fly in the ointment. The theory is too deeply rooted that goods cheaply bought are half sold. As with lumber products, the outstanding need of the wholesale stock market is stability. A fair profit to the wholesaler and no dealer receiving an undue advantage over his competitor! Here, again, the true understanding of wholesale costs and an honest purpose to live and let live is all that is needed. That the competitive situation is such as to prohibit unreasonable wholesale prices must be apparent. The dealer who, in the name of business thrift, drives hard bargains simply stands in his own light. He gets no advantage even over his competitor by such a course, and with certainty encourages the wholesaler to poach whenever and wherever opportunity offers. If the "volume" bug could be eliminated from the mind of the wholesale distributor and selfishness in buying, on the part of the dealer, recognize its own folly, all would be well. Get together and study each other's problems.

Increase in Cost of Millwork Supplies

	Per cent.
Packing lumber	43
Door stock	18
Sash stock	21
Shop pine lumber	23 to 28
Yellow pine lumber	28 to 32
Veneers	23 to 40
Window glass	54 to 75
Plain plate glass	107
Freight on glass	5
Glue	100 to 300
Sandpaper	21
Coal	80 to 100
Nails, sash dowels, etc.	46 to 50
Frame pulleys	20
Wages	15 to 25
Shop supplies	25
Birch lumber	8 to 10
Oak lumber	13 to 15
Basswood lumber	20 to 25
Gum lumber	10 to 25
Building paper	12
Sash cord	50
Sash weights	25
Stationery	50
Office supplies	25
Machinery	25
Screen wire	75 to 100
Oils, varnishes, and stains	25 to 250

Do retailers consider these facts when driving hard bargains with the wholesalers? Live and let live. Educate the public.

VI. Special or Odd Work.—When we come to consider special or odd work there is presented a complex and difficult business problem. Although the equitable principle comprehended by the phrase "trade ethics" applies to every phase of the industry, to retailer as well as wholesaler, it is most frequently invoked in reference to the distribution of odd work.

This class of products is not carried in stock, and the service of the dealer is truly of the agency character. The capacity of the dealer to serve his wholesale principal in this specialized field is unquestioned. There is, however, a natural limit to this capacity to be of practical help. Just what this limit is must be determined by the custom and practice of localities. Good sense and fair play must aid if the problem is to be helpfully solved.

The wholesaler who sells direct simply because a dealer in a given community handles the product of some other wholesaler commits a trade blunder. The fact is, the whole situation would be aided if dealers were to select their wholesale principals and stick to them. Through such course the hard lines of the competitive strife would be modified and trade justice more thoroughly achieved.

In the same spirit that dealers urge the wholesale class not to give aid and comfort to mail order competition, the wholesaler has the relative right to insist that the dealer enter into no selfish alliance with the small local mill. The line of cleavage is definite; the mutuality of interest certain. The dealer who is careless of his wholesale partner's trade interests simply sows the thistles of discord. The wholesaler who goes over the head of his local representative invites reprisal.

For years custom fixed five hundred dollars as the limit of the dealer's right to particpate. Improved and changed conditions have doubtless created a situation wherein this limit in justice should be raised. The problem will not permit of solution by co-operative agreement, and this because of the law's prohibition. In other words, an artificial status cannot be created. Where custom in this new environment has developed a satisfactory status it should be faithfully observed. Where discord prevails, the wholesaler, through individual initiative, should squarely meet and solve the problem. Stability and harmony, grounded in justice, in no wise offend the law.

As suggested, an artificial status cannot legally be created. Individual initiative must be preserved. What is a fair figure beyond which the dealer cannot logically serve his wholesale principal is a matter for each millwork producer to settle in his own mind; but in so determining, equity and justice to the dealer should control.

A number of wholesalers have indicated that from $1,000 to $1,500 is the marginal limit within which the dealer can usefully serve. I make no claim of being able to indicate the amount, even if such a course were proper. However, if the suggested range of figures ($1,000 to $1,500) is just to the trade, and will in no wise burden the public, there is no reason why individual initiative should not adjust itself to such a limit.

VII. Line Yards.—The line yard that indulges in jobbing practices creates a situation wherein it invites trade piracy. Taking advantage of opportunity to profit when out of line with well-established trade channels, not infrequently acts as a boomerang. Remember this: The other fellow also has an investment; he performs a real trade service; you need him; the public needs him. Why throw a wrench in the wheels?

As indicated at the outset, I make no claim to mastery of the complicated trade problems here involved. All too frequently the law, as interpreted, is a stumbling block in the path of industrial progress. This result, generally speaking, is due to a lack of grasp of the facts. Sure it is that no legislative body would deliberately cripple business operations. As to trade statutes, the purpose was and is to relieve industry of artificial restraints that tend to burden the public. This, however, does not prevent those engaged in a given line from correcting, by the open, co-operative method, economic error. It is in undertaking to achieve this helpful and legal result that a correct grasp of industrial facts is essential.

A word in conclusion. Both the wholesale and retail operation are fiercely competitive. The over-supply of competing units reduces the element of profit to the minimum. Service requirements are exacting and highly technical. The legitimate trade interests of both wholesaler and retailer are bound by common ties. No industry holds more vital relation to public welfare. The public must be adequately and reasonably served. This service is best performed through the medium of a well-ordered industry. The price-cutter is a blunderer and a marplot. In the final analysis he serves no other than an evil purpose. The outstanding need is a frank and honest recognition of the trade difficulties to be solved and the courage to do right. Each side in its inner conscience knows the equity of the situation. Let those who have the vision to follow the straight road stand together—the slackers will soon make their presence known, because the type has common earmarks and is universally yellow. The solution cannot be achieved through agreements written or subtly devised and understood. The only way is the open and constructive course.

We live in a tragic hour. Mighty forces are moving under the surface the world over. Throughout the land there is an awakened spirit. On every hand industries are putting their house in order, not alone that they may respond to the national need in this grave hour of dan-

ger, but that they may the better co-ordinate their processes when the period of readjustment comes. Government itself is not dealing with the individual, but rather with the industrial group. Co-operation is recognized as essential. The grave question we must answer to ourselves is this: Have the wholesalers and retailers in millwork products the vision, grasp, and understanding so to organize their separate fields that efficiency, economy, and public service will dominate their process? Can the two interests lay aside the petty and unworthy and cooperate constructvely along lines that will tend to build up and strengthen?

These results can be achieved solely through the application of the "square deal." He who so orders his conduct is contributing his bit, whether it be in a small yard in some distant village or within the four walls of a great factory.

Not Much Activity in Spruce in Great Britain

The Timber Trades Journal of London, England, in a recent issue, discussing the spruce market, says:

"Several weeks have passed since the concessions were made in the American trade, but still we hear of very little movement. It is the old story—freight and charges are too high, and the business is not worth doing. Glad as producers in America would be to do a little export trade in wood, they have a better home demand than usual for their goods; the cost of the production has been high, and they cannot make such reductions in price as will meet the situation on this side. Nothing, indeed, but a change in the shipping position will have much effect. As regards deck loads on steamers, some small parcels will probably be arriving shortly; but, as our Liverpool correspondent remarks, the government concessions are of a very negative sort, and will need to be extended if any appreciable quantity of wood is to come over from America this year."

A number of interviews with leading English importers are also published by the same journal, one of which, by Mr. Edward Price, of the firm of Price & Pierce, is representative of all the others. Mr. Price said:

"At present the Canadian trade would not be materially increased by the relaxations. While the increase in the maximum prices was helpful, the high rates of insurance for war risks prevented business being possible. While 5 or 6 per cent. was formerly the war risk, today it was as high as 50. In addition to this, the ships all wanted freight paid in advance, and insurance had to be paid on that, too. The price, in these circumstances, with the heavy extra charges, made business impossible, as the cost exceeded the limit of prices. "There is another difficulty," continued Mr. Price, "and that is that, even if we were prepared to do business on these unsatisfactory lines, we cannot get the tonnage.

"The proffered deck accommodation practically amounts to nothing. Ships are laden with munitions or grain down to the load line, so, while the decks are free, nothing can be carried on them. Such deck accommodation as may be available will probably be used for the shipment of government timber A little timber may come over in this way, but very little. The ordinary trade is dead. Last year at this time we had some 100,000 tons on the way here; this year we have none.

"A curious deadlock has arisen lately, when two British sailing ships laden with pitch pine put into Halifax, where they are lying still loaded and awaiting the government's permission to proceed to their ports of destination in the United Kingdom. We have sold the cargoes, but cannot deliver the goods. But this is only one of the many difficulties we have to contend with."

Quebec Cullers' Report

The following comparative statement of timber measured and culled to date is furnished by the Quebec Supervisor of Cullers' Office, under date of September 5:

	1915. Cu. ft.	1916. Cu. ft.	1917. Cu. ft.
Waney white pine	395,120	140,160	85,880
Oak	104,960	286,960	90,600
Elm	46,840	69,440	105,960
Ash	840	1,680	320
Butternut	.....	40	.....
Birch and maple	48,880	46,880	15,880
Pitch pine	.....	.....	41,230
Fir	.....	.....	36,490

During the year ended 30th June last the Laurentide Company, Grand'Mere, P.Q., earned the largest profits in its history. The net earnings totalled $2,220,000, an increase of $976,377, of which $1,841,981 was derived from the mills, $253,627 from lumber, etc., and $125,050 from investments. After deducting bond interest, depreciation, and profits tax, the net profits amount to $1,720,011, a gain of $782,189. A large portion of the increased profit was derived from the sale of pulp products.

Ten More U. S. Forest Battalions Authorized

The formation of a second "Forest" regiment comprising ten battalions and composed of lumbermen and woodworkers, who will go to France and get out of the forests materials for the use of the American, French, and British armies, has been authorized by the U. S. War Department. Two battalions are to be raised at once with the active aid of the Forest Service of the Department of Agriculture. It is expected that the remaining eight battalions will be called for in a short time. Nine "service" battalions, made up of laborers who will be used in connection with the Forest regiment, have also been authorized and two battalions have been ordered raised at once.

In order to provide for future contingencies it has been decided to commission at the present time enough officers for other battalions yet to be raised. Those men not needed now will be placed on the reserve, and will be called as the other units are formed. According to the present plan, fifty per cent. of the officers will be sawmill and logging operators, twenty-five per cent. will be technical foresters, and twenty-five per cent. will be men with military training. A number of the graduates of the engineer camps have been selected for service with the new units. Each of the ten battalions of the second regiment will comprise three companies of 250 men each, and will be under the command of its own major.

No Strikes to Hamper U. S. Ship Construction

An agreement was recently reached between representatives of the United States Navy Department, the Emergncy Fleet Corporation, and the American Federation of Labor providing for rapid and peaceable adjustment of all labor disputes in shipyards throughout the country, in order that the work of ship construction in public and private yards may continue during the war without danger of serious interruption. The agreement calls for the immediate creation of an adjustment committee consisting of three, four, or five members, according to the nature of the particular case under consideration. The President has appointed the chairman of the commission, and Samuel Gompers, president of the American Federation of Labor, is to name the second member. A third member will be named by the Emergency Fleet Corporation.

Busy Times at Thessalon

For two months or more the Thessalon River has carried to Lake Huron hundreds of thousands of logs of all sizes and descriptions, says the Algoma Advocate, of Thessalon, Ont. Early in the season came logs, cut to certain measure, for pulpwood. From bank to bank the surface of this giant stream was carpeted with them. Week in and week out, night and day, this pamorama of wealth swept hrough the town. Then for a time a different class of timber monopolized the waterway, and it was railroad ties in never-ending procession that wobbled, squirmed, and bobbed their journey to Lake Huron. Now it is pine logs for the big mills, some of them great giants of the forest, miles upon miles of them that are hurrying to the lake to be chained together in booms and piloted by tugs to the manufacturing centres in Canada and the United tSates, to be made into ships, houses, furniture, coffins, and cradles. This seems a primitive method of transportation to the uninitiated, but railroad trains would be puny, indeed, tackling a job so immense.

Putting an End to Theft of Logs

The Cleveland-Sarnia Saw Mills Company, Ltd., have had a great deal of trouble for a few years past on account of residents converting to their own use logs belonging to the company which had broken loose from the company's booms. In the end the company prosecuted five residents before the magistrate at Chatham, and all of them pleaded guilty and made restitution, amounting to some $200, together with expenses and court costs. Sentence was suspended in each case.

Closing Down Pacific Coast Mills

A report from Seattle, Wash., states that lumber manufacturers and logging operators throughout the Pacific Northwest have unanimously decided to stop all operations for at least four months, or until after the beginning of 1918. It is stated that the shutdown is not due to the strike of employees, but rather the result of a depressed market. The shutdown does not include shingle mills.

The British Columbia Lumber and Shingle Manufacturers' Association have agreed with the Canadian Pacific Railway to load all cars to their full capacity, on the understanding that the railway company will not put a requirement to this effect in their tariff.

Hon. J. D. Connolly, agent-general for Western Australia, recently arrived in Vancouver on a visit to Canada to make enquiry on behalf of his government into the timber industry.

Timely Advice About Slash Disposal

By R. O. Sweezey

Very soon legislation may be expected in Eastern Canada requiring some form of slash disposal by logging operations. That is as it should be; but first we should look for some other more urgent ameliorations in the form of properly developed systems of fire ranging. Meanwhile, blind-stabbing at slash disposal may attract attention, so let us be on our guard and act intelligently when we do tackle the question.

Recently there have been published several references to this question, and in these there have been indicated certain methods as worked in a few localities of Western Canada and in the United States. But while cost data on these and other experimental efforts prove interesting, we must be careful not to base upon them our calculations of cost for slash disposal in Quebec and Ontario. The forests of Western Canada differ greatly from those of Eastern Canada where, instead of comparatively clean forest floors, as prevail in Western Canada, our Eastern forests are littered with underbrush, fallen trees, and dead or dry tamarack, providing such impediments to ordinary operations that the problem of slash disposal, unless it includes disposal of these obstacles, would not be half solved.

Besides, there are several important features that should be considered in regulating the disposal of slash. For instance, in the operation of the extensive black spruce flats of Northern Ontario and Quebec, that are so characteristically wet and swampy, the same care and expense need not be adopted as would be advisable on dry slopes or hills such as predominate in the sandy areas of the St. Maurice Valley, in the Province of Quebec. Then there is the obvious necessity of brush disposal in proximity to railroads. Indeed, every locality has its peculiar menaces, and these should be met according to their nature, but not advisedly by rigid rules designed to meet certain conditions that may have forced themselves more prominently upon the attention of the law-makers. It is flexibility that we should have in this.

Disposal of brush in some form seems desirable to remove a fire menace, so let us get at the menace in the proper way. For, should legislation be imposed and rigidly applied with wooden-headed adherence to a formula that fails to support the proper elements, we shall find loggers obliged to labor unnecessarily in places obviously not menaced by reason of local conditions. Irritating and exasperating severity might well be conceived that would bring forth contempt and condemnation for the regulation. There has been far too much said against the so-called "practical lumbermen" by those recently raised to pedestal prominence by reason of forestry school education. We wish in this country to benefit by the extraordinary good sense and keen judgment of the lumbermen, and these men can tell us that brush disposal, like many other questions of forestry and logging practice, may be made a fool of by improper application in doses that would be dangerous instead of remedial. Now, as common sense would suggest starting with small doses of this remedy, we ask ourselves where is the greatest menace that we seek to remove? At once the lumberman will say that slash is most dangerous where people are wont to pass back and forth or to make their abode. In other words, it is along railroads and river or lake fronts, or in the vicinity of logging camps that slash provides the greatest menace following a winter's operations. No one is interested in "monkeying" around old choppings in the interior, but along rivers, lakes, and railroads we find river drivers, prospectors, and hunters, who stop anywhere to camp or cook their meals, and if a log camp is near by, curiosity is usually keen enough to lead the passer-by to peep inside or prowl aroung, long enough, perhap, to throw a lighted match or cigarette butt carelessly into the heaped-up dry brush or into the piles of chips that litter the surroundings of every log camp. Let us, then, apply our first efforts at brush disposal in these menaced localities, namely, the highways of the forest. Merely a narrow strip properly cleaned, at small cost, will be sufficient to remove a great danger; and, having done this successfully, we can figure on further extension of efforts.

A canvass was recently carried out among the lumber camps and mills north of Everett, Wash., to find out how many employees could be counted upon for getting out contracts for material for the government, and it was found that there were at least 5,000 loyal workmen ready at any time. It is now stated that the threats made by the I. W. W. to call a general strike unless members of its organization are at once released from jail will not affect the lumber situation.

Model Logging Camps

The Schroeder Mills and Timber Company, a corporation allied with the John Schroeder Lumber Company, of Milwaukee, Wis., is operating extensively in its timber limits along the Pickerel River, in Blair and Mowat Townships, Parry Sound district, Ontario. The company is employing 750 men there in getting out white pine logs, and it will this winter log about 25,000,000 feet, which will be disposed of to mills in the Georgian Bay district, as in past seasons. The company believes in making everything attractive to its employees in the woods, and has constructed seven model camps. Each camp is provided with bath houses, reading rooms, moving picture shows, and other conveniences and amusements that have been hitherto unheard of in the Northern logging territory. The Shantymen's Christian Association, a Canadian welfare organization, with headquarters at Toronto, is contemplating the erection of buildings at these camps, and will greatly aid the company in its improvement of camp conditions. Another company owned by the John Schroeder Lumber Company is the Northern Pacific Logging Company, which is operating two camps on Greenway Sound, Broughton Island, Vancouver.

Lumbering Industry Shown in Movies

Dr. D. E. Diemer, of the United States Forest Products Laboratory, is having moving picture films prepared of the logging and lumber manufacturing industry in the United States, showing the various stages from the felling of the tree to the plowing of a cleared field in dstricts where cut-over land is cultivable. The first pictures of the series were taken in the white oak and red gum forests of Arkansas, where some very large logs are obtained. In this picture the trees are shown as they are felled, and subsequently logs are hauled by the mules or on logging trains to the sawmill, through miles of swamp. Occasionally a yoke of oxen are shown drawing the load. The various processes at the mill are also shown, from the placing of the log on the carriage, through the sawing, grading, piling, and shipping of the finished product to the consumer. Special portions of the film show very clearly the difference between plain sawing and quarter-sawing. The following portions of the film show land-clearing operations in Northern Wisconsin, carried on by the use of the most modern machinery and explosives.

Will Put a Stop to Incendiary Forest Fires

A large number of forest fires in the State of Oregon, which have been traced recently to incendiary origins, have resulted in the state sending detachments of troops to the forests, with instructions to shoot any persons found in the act of setting fire to the forests. The order is based upon both federal and state authority. The Department of Commerce, Washington, D.C., received reports to the effect that I. W. W. agitators and others who are accused of working for the interests of Germany had set fire to thousands of acres of timberland in Northern Idaho, Oregon, and Montana. Among the forests which it was attempted to destroy were some in which large quantities of spruce will be obtained for use in the production of aeroplanes for the Allies.

Logging Camp Quarters on Wheels

Logging operators in Eastern Canada are not intimately acquainted with the system of housing camp employees in cars on wheels which is frequently met with on the Pacific Coast, particularly in camps in Oregon and Washington. Excellent logging quarters are furnished in such cases, and the comfort provided for the men is remarkably complete. The Great Northern Lumber Company, of Leavenworth, Wash., are operating a camp in which the men are cared for in this manner. This company's logging equipment consists

of 28 miles of track; one Heisler and two Climax locomotives are employed; 40 connected trucks and 28 flats transport the logs from the woods to the mill. McFarlane sky-line system and Willamette engines are employed. The ground is very broken and rough where the present logging is being conducted. The operations have been laid out and plans made embracing 600,000,000 feet of timber. Every care has been taken to avoid mistakes, and, despite the unsatisfactory labor conditions and difficult ground, a good showing is being made by the crew.

The logging manager determined to build a model camp and housing system for the men. The camp is portable, the entire outfit being on wheels. The cars are the latest models in camp cars. They are roomy and sanitary, equipped with air brakes and all the necessary safety appliances, and may be transported over any line safely. The cars are 11 x 60 feet.

Construction of Cars

Discarded trucks equipped with new sixty feet 5 x 10 sill, eight sills to the car, decked with two-inch shiplap, covered with 1 x 4 T. & G. flooring, laid with wearing areas, removable studs and braces 3 x 4, top plate 3 x 8, formed with a truss, six truss bolts being used in each side. This is substantially standard box car construction, as to this portion of construction. One by four B. N. car siding outside and ceiling with 5/8 x 4 ceiling inside, cased with special machined 3-inch and 4-inch K. D. casing. All side sash hinged, monitor sash slide. Roof sheathed with ceiling, covered with heavy tarred paper, over which grooved car roofing is laid, carried by perlines grooved into car lines, six horizontal bolts running parallel with car lines. All cars equipped with necessary shelving, cabinets, work tables, etc., and painted two coats; body light brown, trimmed with dark brown; interior, green-gray.

Capacity of bunk cars, 28 men; main dining cars, 72 men.

These cars are made up in the following units: Eight bunk, two full diners, and four kitchen-diners. The latter are equipped with kitchen in one end and diner in the other, it being desired to use these cars in the accommodation of small crews of from 20 to 30 or 40 men, such as filer and bucker crews and small crews used in logging small patches of timber isolated from main body. All bunk cars supplied with a sash for each bunk so as to permit the occupant to regulate ventilation to suit himself. Dining-room tables three feet wide and eight feet long, with seating capacity of eight men, individual stools being used for seating; cabinet for storage of bread, cake, cookies, etc., and table equipment built in end of car.

The Delco electric lighting system is employed. It operates 78 hours with one charge and provides 50 lights.

The bunks are provided with excellent springs and mattresses. In order to ensure that the feet of the sleeper would not protrude beyond the length of the bunk, a section of sheet iron separates each compartment, thus ensuring greater privacy and comfort. Shower baths have been installed in the end of a car.

Screened and Cooled Meat Rooms

The kitchen cars have carefully screened meat rooms. The water tanks are located in this portion of the car to ensure coolness of the contents. The water supply for the kitchen cars, both hot and cold, is located directly above the ranges.

The dishes are white, heavy porcelain, and the cutlery is white metal. The tables are set attractively. Fire extinguishers are installed in each car. The cars are heated with stoves.

New Method of Advertising for Mill and Woods Workers

The C and O Lumber Company, Brookings, Oregon, has recently advertised in a novel way in the Southern Oregon newspapers. It makes a plain statement of the working and living conditions at its camps and mill, which is evidently designed to attract the steady class of men.

This experiment will be watched with interest. Here is possibly a solution of the labor problem that has certainly not been solved by the familiar "three-crew system"—one going, one working, one coming. The advertisement in question follows:

"Brookings Maintains High Level of Living and Employment Conditions.

"Brookings, Ore.

"To the Public: On account of the many letters we have been receiving from parties in this and other localities, we have deemed it best to set out in an open letter the conditions of living, employment, and recreation that surround the employees of this company.

"The town of Brookings and the manufacturing plant are located on a plateau about 100 feet above ocean level and running from the shore line back about three-quarters of a mile. Unlike most sawmill towns, the site is rolling bench land, free from stumps and slashings. The climate is mild. Snowfall is a rarity, and during the summer months the weather is that of a beach resort. In the winter the temperature is moderate.

"The view of the ocean, beach, and surroundings is beautiful.

"A good public school is provided for all grades; moving picture theatre, with a seating capacity of 300, with two weekly shows; general store, carrying a large stock at reasonable prices; also a well-equipped hospital is provided for employees and families, and is in charge of a first-class physician and surgeon, with trained nurse in attendance.

"Living Accommodations.

"For single men there is a large hotel provided with showers and other facilities, with table board that is unexcelled in its line.

"In addition, comfortable bunk houses are provided to take care of excess of single men over and above the accommodations provided in the hotel. Rate of board, $6.25 per week; lodging, 50 cents and up, according to accommodations.

"For married men comfortable houses are provided, with rents ranging from $6 per month and up, according to type selected; water, light, and wood extra at nominal rates usually prevailing in municipalities of like character.

"Wages and Working Conditions.

"The minimum rate for common labor is $3 per day of ten hours time in all departments, with usual advance above this rate for responsible positions.

"The company operates a sawmill, logging camp, railroads, wharves, and shipping; runs its own line of steamers to California points.

"Requirements Applicants Must Fulfill.

"No man over 50 years of age will be employed.

"Before entering our employ each and every applicant will be obliged to pass an examination by the company's physician and satisfy him as to physical condition.

"Married men must work for the company at least thirty days before they will be permitted to bring their families, in order that both parties may be satisfied as to conditions and ability.

"No liquor is permitted in the town; parties found intoxicated will be summarily discharged.

"General.

"We desire to build up a community of sober, thrifty, industrious men with families, and such will be given the preference in the matter of employment at all times.

"There is plenty of continuous employment here for a large number of active, sober men in practically all classes of work, and any parties meeting these requirements can feel assured of employment on reporting here.

"The company invites correspondence from parties interested, and further information can be obtained from M. Jordan and other stage operators at Grants Pass, or F. G. Lung, Medford.

"This point is reached by auto stage from Grants Pass via Crescent City, at the present time consuming about nine hours for the trip.

"C and O Lumber Company."

Under the conditions prevailing in the labor market in Canada, it looks as though a plan of this nature might be worth trying out in connection with some of the mills and logging camps.

T. and N. O. Pulpwood Shipments Show Increase

Pulpwood shipments were made over the T. and N. O. Railway during July, 1917, to Merritton, Thorold, Toronto, Georgetown, Ottawa, Ontario; and Niagara Falls, Fielton, Norfolk, Black Rock, Brownville, N.Y.; Johnsonburg, Pa.; Grand Rapids and Appleton, Wis., and Port Huron, Mich., as follows:

	Cords.
July 1 to 7	2,310
July 8 to 14	2,405
July 15 to 21	2,403
July 22 to 31	4,250
	11,368

This is an increase over June shipments of 2,671 cords, or 30.7 per cent.

Wood pulp and paper shipments were as follows:

	Wood pulp. Tons.	Paper. Tons.
July 1 to 7	239	905
July 8 to 14	444	1,324
July 15 to 21	305	1,159
July 22 to 31	240	1,635
	1,229	5,133

Compared with preceding month's shipments, there is a decrease of 3.7 per cent. in wood pulp and a decrease of 13.9 per cent. in paper.

A campaign is being carried on in the neighborhood of Kingston, Ont., to secure 100 forestry men for overseas service.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) $2.10 per inch, each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

For Sale–Lumber

For Sale—Lumber .

200,000 ft. Cull 1 in. and 2 in. Hemlock.

S. L. PURDY,
17-18 Coehill, Ont.

For Sale

A limited number of cedar Telephone Poles, 25 ft. to 35 ft. long. Also a few cars 8 ft. cedar fence posts, 4½ in. and up at top. For particulars apply Lynch & Ryan Lumber Co., Marmora, Ont. 18-21

For Sale

Can make prompt rail or boat delivery of from 3,000 to 5,000 pieces of Jack Pine Piling, from 40 ft. to 70 ft. long.

The New Ontario Timber & Trading Co.,
17-20 Sault Ste. Marie, Ont.

Lumber For Sale

300,000 ft. B.M. 1 x 4 and up Clear and No. 1 Spruce.

400,000 ft. B.M. 2 x 4 to 2 x 10 Spruce. Piled widths and lengths separate.

GEO. C. GOODFELLOW,
c Montreal, Que.

For Sale–Machinery

For Sale

Band saw-mill machinery in our Saw-mill at Lakefield, Ont. Two complete units. Shafting, pulleys, three boilers, etc. For particulars apply The Dickson Co., Ltd., Peterborough, Ont. 15-18

Machinery For Sale

One 36 in. planer, roll feed, with countershaft.

One Jackson & Cochrane 24 in. planer, roll feed, with countershaft.

One 36 in. two drum sander, Cowan & Co.

R. W. NICHOLSON,
18-21 Strathroy, Ont.

Machinery For Sale

A Light Planer, Matcher and Moulder.
12 in. 4-side Moulder.
Power Feed Rip Saw.
Trim Saw. 12 in. Jointer.
Dry Kiln. Lighting Plant.

A. J. LINDSAY,
94 Pembroke Street,
17-20 Toronto, Ont.

Wanted–Machinery

Sawmill Wanted

Saw-mill wanted to manufacture about two million feet Hemlock and Hardwood. The Bradley Company, Hamilton, Ont. 18-18

WANTED—Heavy used 54 in. or 60 in. Band Resaw, capable of handling large timbers. Give name of maker, condition, age, where located and price. Box 620, Canada Lumberman, Toronto, Ont. 18-18

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

POSITION WANTED AS DEPOT CLERK for Lumber Company. Can come at once. Box 621, Canada Lumberman, Toronto, Ont. 18-18

WANTED POSITION as trimmer man, air lift; five years' experience mill cutting, 150 M. daily. Address Z. T. Harlow, Crossburn, Nova Scotia. 18-21

WANTED POSITION AS BUYER for good lumber firm in States or Canada. Have over 12 years' lumber experience. Box 23, Canada Lumberman, 119 Board of Trade, Montreal, Que. 18-19

A PRACTICAL LUMBERMAN, forty years old, with twenty years' experience, is open for engagement June 1, 1917. Last ten years with very large Canadian firm as superintendent and sales manager. Best of references. Box 496, Canada Lumberman, Toronto, Ont. 2-18

WANTED POSITION as Band Saw Filer or mill superintendent, having 25 years' experience on band saws and mill wright. Will go anywhere for yearly position. Can furnish gilt edge reference. Age 46. Can speak English and French fluently. Box 609, Canada Lumberman, Toronto, Ont. 15-18

EXPERIENCED LUMBERMAN with good selling connection in Montreal and vicinity, is desirous of establishing a connection with a reliable lumber manufacturing firm in Spruce and Pine on a commission basis. Highest reference. Box 623, Canada Lumberman, Toronto, Ont. 18-19

WOULD LIKE TO HEAR from some saw mill owner who needs the service of a competent and reliable mill man who has had twelve years' experience in manufacturing in up-to-date mills; also would be willing to invest some capital with good people. Box 613, Canada Lumberman, Toronto, Ont. 17-20

POSITION WANTED—As Manager or Office Manager with lumber and woodworking business. Twenty years' practical experience in all departments, including lumber factory and office routine. 15 years with one large Ontario company. Have always made good; best credentials. Now engaged. Apply Box 624, Canada Lumberman, Toronto, Ont. 18-19

Business Chances

Sawmill For Sale

Complete Sawmill for sale, cheap and easy terms. Capacity 20,000 feet per day. Field Lumber Company, Limited, Field, Ont. 11-t.f.

Timber For Sale

Standing Mixed Timber estimated at 280 acres, for sale in St. Etienne de Bolton, near Bolton Centre. The Canadian Last Block Company, Limited, 135 Carriere St., Montreal. 18-19

Saw Mill For Sale

Complete Sawmill with timber rights and freehold lands for sale, excellent shipping facilities. Mill situated County of Shefford, with a visible supply of soft wood and hardwood timber in the neighborhood for an extended life. Address P. O. Box 222, Waterloo, Quebec. 16-t.f.

Saw Mill For Sale

For quick sale, Saw Mill complete, capacity 20,000 feet per day. Or will sell parts separately. Also two Pulpwood Loaders complete with Upright Boilers and Engines, capacity 500 cords each daily. All machinery in excellent condition. For further particulars apply The James Horrigan Company, Limited, Port Arthur, Ont. 15-18

Jobbers Wanted

We wish to let several contracts to take out logs on Berth No. 6, being broken front lying between the Magnetawan and French Rivers. This berth is all convenient to Canadian Northern Railway.

John Harrison & Sons Company, Limited,
Saw and Planing Mills,
9-t.f. Owen Sound, Ont.

Mill Plant and Limits For Sale

43 Miles Limits on 31 Mile Lake, Gatineau Valley, containing Basswood, Spruce, Fir, Pine, Cedar, Birch, Maple and Pulpwood.

New Waterous 8 ft. Improved Double Cut Band Mill complete. Steam Alligator, Boats, Sleighs, Wagons, Harness, etc. For further particulars apply to

A. W. STEVENSON,
P. O. Box 2624,
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Factory and Land For Sale by Public Auction

In re:

Damien Lalonde Limited

1000 Christophe Colomb Street,
Door and Sash Factory of Montreal,
In Liquidation

To be offered for sale by public auction at No. 69 St. James Street, Montreal, on THURSDAY, 4th OCTOBER, 1917, at Eleven o'clock.

24 lots of land in St. Denis Ward, City of Montreal, containing over 80,000 feet of land with buildings thereon erected, comprising 2 storeys solid brick building, 150 x 90 ft., iron framed, concrete foundations and ground flooring, gravel roofed, upper floor mill construction with saw mill and joiner shop, kiln and machine shop, heating and lighting system, waterworks and one 8-car railway siding to C. P. Ry., and all the machinery therein contained, lumber sheds, stables and keeper's dwelling, etc., etc.

Conditions of Sale: Purchaser to assume the mortgages of $76,000.00, pay 10 per cent. on adjudication, balance of purchase price on completion of deed of sale as per conditions of sale deposited at the Office of the Liquidators, who will give any other information on demand.

VINET & DUFRESNE,
Liquidators,
18-18 99 St. James Street, Montreal.

FOR SALE

Kootenay District, B. C.

STANDING TIMBER

Cedar	24,500,000 ft
Spruce	17,500,000 ft.
White pine	17,000,000 ft.
B. C. fir	1,100,000 ft

Lies on Jordan River. For quick sale will accept $20,000 for this block. Annual rental only $400. Government dues 50c per M. when timber is removed. Above quantities guaranteed.

We have other larger blocks of choice Western timber to offer.

J. E. MURPHY,
26 and 28 Adelaide St. W.,
16-t.f. Toronto, Ont.

Valuable Water Power

and 162 Square Miles of

Valuable Timber Limits

FOR SALE BY PUBLIC AUCTION

The limits are on the river, Mississippi Branch, a tributary of the Madawaska, and Water Power at Eganville, Ont., on the Bonnechere River. These will be offered for sale by Chas. M. Henderson & Co., Auctioneers, at their office, 128 King St. East, Toronto, Ont., on **October 30th, 1917, at 2 o'clock p.m.** The Limits will be offered in three parcels, as follows:

Parcel No. 1—

Comprising parts of the Townships of Mayo, Carlow, and Raglan, license covers in all 88 square miles, a great portion of which is deeded or located lands.

Parcel No. 2—

Comprising two parts of the Township of Cashel in two licenses, covering 18½ square miles, well timbered.

Parcel No. 3—

Comprising parts of the Townships of Ashby and Effingham, in all, 78½ square miles, well timbered. This parcel also includes lots 29 and 30 Con. 10 Mayo, making 100 acres (more or less), on which is located a valuable water power, known as the Big Chute, situated five miles from the terminal of the Bessemer & Barrys Bay Railway.

All this country was cut over some years ago for the pine, of which there is considerable left, along with large quantities of Birch, Maple, Ash, Elm, Hemlock, Cedar, Spruce, Balsam, and Basswood, suitable for sawlogs, also pulp wood, railway ties, and large quantities of hardwoods for chemical purposes and a great growth of young pine.

These limits are close to the Central Ontario Ry. on the West, a branch line of which runs in the Childs Iron Mine in the Township of Mayo, from L'Mable Station. They are also easily accessable from Barrys Bay, on the Grand Trunk Railway.

The Sale will be subject to all conditions and regulations of the Department of Lands, Forests & Mines, affecting same. The licenses permit the cutting of all kinds of timber, except on deeded or located land.

The reason for selling is for the purpose of closing up an Estate.

Terms of sale regarding limits, 25 per cent. of purchase money down, 25 per cent. 1st of July, 1918, balance 1st of July, 1919, bearing interest at 6 per cent. per annum. A liberal discount can be arranged for cash. Transfer of license will be made on final payment, purchaser bearing cost of transfer.

There will also be offered for sale a valuable Water Power, with a cement dam, and the stone walls of a flour mill; the latter was burned in 1911. This is in the centre of a thriving village served by the C. P. R. and G. T. R. Railways, a good manufacturing site.

Terms for the Water Power: 25 per cent. cash on day of sale, balance can be arranged.

Any further information regarding these properties will be furnished by writing the undersigned.

The properties are offered for sale subject to a reserve bid.

GEORGE B. FERGUSON,
Renfrew, Ont.
August 30th, 1917. 18-18

Maple Squares Wanted

Wanted to purchase for export in 1918 one million feet Maple Squares: 1¼ in., 1½ in., 1¾ in., 2¼ in., 2½ in.; lengths, 12 in., 18 in., 24 in., 30 in., 36 in., 42 in., 48 in.

State price air-dried and bundled f.o.b. cars. State shipping point. Box 625, Canada Lumberman, Toronto, Ont. 18-21

For Sale

Timber Limits and Sawmill, estimated fifteen million feet of hardwood and ten million feet soft woods. Sawmill capacity 25 M. feet, shingle mill 125 M. Docks, tug, booms, logging outfit, houses, etc. Price $35,000.

The Manitoulin Lumber Co., Ltd.,
11-22 Walkerville, Ont

Canadian Forestry Companies in France

The following report of the work of the Canadian Forestry Corps has been received by the Canadian Government from general headquarters in France:

There are at present 22 companies of the Canadian Forestry Corps operating in France. The first eight companies arrived between December last and the end of March, and five companies arrived in April, with their full technical equipment and approximately 60 per cent. of their transport. Eight more companies arrived in the third week in May.

The companies are equipped with Canadian made saw milling machinery and tools, and the greatest efficiency and keenness is displayed by all ranks.

All species of lumber are manufactured, including sawn timber, sleepers, trench-timber, pit-props for roads and mining.

The establishment of the companies, including transport is 190 all ranks. The average production varies according to the nature of the woods. In suitable woods between 1,000 and 1,500 tons of sawn lumber, together with sufficient round timber to bring the output up to 2,000 tons per month, may be expected. On round timber alone, however, a company produces about 4,000 to 6,000 tons per month.

Some of the operations of the Corps are being carried out under shell fire, and one unit was recently heavily shelled, fortunately no casualties resulting.

Of these companies six are employed in the army areas, although their work is greatly handicapped by having to operate in small woods, as a rule devastated by shell fire. The daily output is most satisfactory and wood is delivered direct to armies at short notice.

Companies, including the Canadian Construction Company (colored) are employed in the Jura Wood. The Canadian mills in operation in this area have aroused great interest amongst the French military and civil authorities who have not hesitated to express their admiration of the mechanical efficiency evidenced in the design and construction of the mills.

Ten companies are now working on the lines of communication. Some fine forests have recently been acquired for exploitation in this area.

Wood Fuel vs. Coal

The fuel value of two pounds of wood is roughly equivalent to that of 1 pound of coal. This is given as the result of certain calculations made in a Government forest service laboratory, which show also about how many cords of certain kinds of wood are required to obtain an amount of heat equal to that in a ton of coal.

Certain kinds of wood, such as hickory, oak, beech, birch, hard maple, ash, elm, locust, longleaf pine, and cherry, have fairly high heat values and only one cord of seasoned wood of these species is required to equal one ton of good coal. It takes a cord and a half of shortleaf pine, hemlock, red gum, Douglas fir, sycamore, and soft maple to equal a ton of coal, and two cords of cedar, redwood, poplar, catalpa, Norway pine, cypress, basswood, spruce and white pine.

Equal weights of dry, non-resinous woods, however, are said to have practically the same heat value regardless of species, and as a consequence it can be stated as a general proposition that the heavier the wood the more heat to the cord. Weight for weight, however, there is very little difference between various species; the average heat for all that have been calculated is 4,600 calories, or heat units, per kilogram. A kilogram of resin will develop 9,400 heat units, or about twice the average for wood. As a consequence, resinous woods have a greater heat value per pound than non-resinous woods, and this increased value varies, of course, with the resin content.

The available heat value of a cord of wood depends on many different factors. It has a relation not only to the amount of resin it contains but to the amount of moisture present. Furthermore, cords vary as to the amount of solid wood they contain, even when they are of the standard dimension and occupy 128 cubic feet of space. A certain proportion of this space is made up of air spaces between the sticks, and this air space may be considerable in a cord made of twisted, crooked and knotty sticks. Out of the 128 cubic feet, a fair average of solid wood is about 80 cubic feet.

A Mysterious House Moving

Los Angeles, Cal., has a mystery, the central feature of which is a wooden house, a structure which though of fair size was ordinary looking enough in this centre of beautiful home construction. The house is the property of J. E. Storer, a blind invalid who, with his family, removed to Los Angeles from Australia six years ago. Upon arriving in Los Angeles, a fine home was purchased at 1763 Cahuenga Avenue, and the family has lived there for the half-dozen years in apparent perfect enjoyment.

One morning a week or so ago neighbors were astounded to find a corps of workmen start to work tearing the house down. Piece by piece the structure was reduced to lumber, each individual piece of which was carefully and plainly marked, including the shingles which were torn from the roof and gables. While much of the work was done by paid workmen there was constant supervision by Mrs. Storer and the son and daughter of the family. Visitors were warned from the place by a large sign tacked to the palm trees which adorned the front lawn, and the injunction was backed by a fierce looking dog kept in leash in the yard.

The lumber from the house was done up carefully in neat bundles, except the doors, door frames, window sash, etc., which are to be shipped bodily, and the dismantled structure was loaded on to a British steamer at San Pedro, whence it will be carried to Vancouver, B.C., and from there to Edmonton, Alta., where the Storer family expects to make its future home.

In spite of the curiosity of neighbors and the efforts of an inquisitive lot of reporters, no reasonable explanation was secured of the family's strange proceedings. Perhaps the solution may be obtained later on in Edmonton.

Union Lumber Co.
Limited

White Pine
Red Pine
Spruce
Red and Jack Pine
Lath

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

First Standard Ship in Commission

A London, Eng., despatch states that the first of the British Government's standardized merchant steamers to replace tonnage lost through submarines, has been commissioned after completing most successful trials. The keel was laid down in February and the hull was launched in June. It is understood that six different types of vessels, varying in size from 8,000 tons downward, are being built. Many hundreds of such ships will be constructed.

Embargo on U.S. Lumber Exports Expected

It is expected that in the near future lumber will be included in the growing list of articles the exportation of which is embargoed from the United States except under special license to be applied for in the case of each shipment. The proclamation, it is believed, will be broad enough to cover timber and perhaps some other forest products.

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Technical training and ten years' experience. Timber Estimating and Mapping. Supervision of Lumbering Contracts. Surveying. Forest Planting.
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Review of Current Trade Conditions

Ontario

There has been the usual early September lull in the lumber trade of Ontario during the past fortnight. Toronto wholesalers report a quiet period, though there has not been anything to complain of either in the way of easier prices or reduced demand. The exhibition at Toronto is responsible to a considerable extent for the quietness, as travellers do not count upon booking many orders when so many people from the country and from other cities and towns are visiting Toronto.

This is the time of year when a car shortage usually begins to make itself felt. Inasmuch as there has been more or less of a shortage throughout 1917, and everyone has been well forewarned about it, it is possible that the usual difficulties may not be so marked this year. Undoubtedly, however, with a large grain crop in the West, the car shortage will be considerable, and delay in ordering shipments of necessary stock on the part of retailers is accompanied by much risk.

It is difficult to sum up the condition of the retail trade. It has been moderately active throughout the year, but, even with the good crops which the farmers have obtained, one cannot say as yet whether the farm trade will be active this fall. A year ago it looked as though the poor Western harvest would cause a slump in trade, yet on account of conditions, the effect of which was not fully appreciated, trade experienced a regular boom, which was accentuated by a shortage of stocks, railroad embargoes, etc., so that prices advanced steadily. This year the farmer is doing much better than in 1916, and, arguing from this fact alone, one would expect an active fall trade. However, in these times of uncertainty it is not wise to bank on such a development.

The general trade situation in the United States will probably become the determining factor in this year's trade, rather than the actual success of the Northwest harvest. At present there is much uncertainty across the border on account of the great shifting of trade from normal routes to those created by the war. The example afforded by the course of events in Canada during the first few months of the war should give some confidence to the trade in the United States, but that country is so vastly greater in population than ours that one cannot bank on this, and possibly we will have to witness a disturbance of trade for a few months in the United States before matters reach a steady basis. The United States situation is, therefore, the key to the general trade situation to-day, and as soon as its line of development becomes clearer conditions in Canada will be fairly easy to analyze. Until that time the lumber trade in Ontario may be expected to continue on a quiet basis, with some tendency towards improvement.

Further reports from manufacturing points in Northern Ontario bear out the conclusion already reached, that the manufacturing season this year will be just as difficult as last year—in fact, probably more so, as last year the trade activity in general justified the manufacturers in doing all they could to take out a large cut. This year the same problems prevail in connection with high cost and inefficiency of labor, and expensive food and equipment, while the market outlook is not so definitely encouraging as it was then. However, manufacturers in general are planning to take out as much as the labor situation will permit.

Eastern Canada

Market conditions at Montreal are still quiet. The building trade is not as good as it promised to be, and permit values show a decline, both for the month of August and for the year to date. The discontinuance of shell box orders is likely to have an adverse effect upon the situation. There have been a few additional orders lately, but, generally speaking, the industry is far less active. Manufacturers in Quebec Province are having the same difficulty as elsewhere in connection with the shortage of labor and the high cost of materials. At present the labor situation is aggravated by the uncertainty resulting from the conscription measure, as operators hesitate to employ men who may be conscripted a little later on. There is a little more activity in the export trade, both with the United Kingdom and South Africa. Trans-Atlantic freight rates, however, are higher, the prevailing figure now being $100 per standard, which has to be paid in advance. A few deck loads are being shipped on account of the light bulk of cereal cargoes. Shipbuilders are finding it almost impossible to obtain British Columbia timbers, as the Western mills are filled up with local orders.

Trade at St. John, N.B., shows no change. There have been no shipments of deals during the past fortnight, and there does not appear to be any likelihood of shipments in the immediate future. Stocks at St. John are not expected to be heavy this winter. It is thought that liners will move considerable quantities before spring. Long spruce and dimension sizes are easier, but boards continue firm. Lath are weak, and so are shingles in the high grades, but low-grade shingles are strong, on account of the heavy demand. No contracts for 1918 deals have yet been made, but a number of enquiries have come on the market. Manufacturers say that prices will have to be much higher in order to cover the uncertainties and the increased cost of operation.

The retail demand for spruce in the Eastern States is not heavy, but continues on a fairly steady basis. Factories and box shook manufacturers are using large quantities. Transportation difficulties continue, and there is not much prospect of relief. Spruce prices are firm. Much larger consumption of spruce would take place if shipments could be got through from mill points to a number of the important consuming districts, such, for instance, as Pittsburgh, Pa. The outlook for trade generally is considered good. The hemlock market continues steady, and prices are firm. Signs of revival in the retail trade are noticeable, particularly in farming sections. Government orders for hemlock are now pretty well completed. As a whole, the demand is good. Lath are quiet at Boston and throughout the Eastern States generally. This applies to both 1½ in. and 1⅝ in. Shingles also are quiet.

United States

The unsettled nature of business in general in the United States continues. This is not a matter of surprise to Canadians who see in the United States situation a strikng parallel to that which existed in Canada during the first few months of the war, and expect the United States situation to develop along similar lines. The experience of Canada in this connection should provide good cause for confidence in connection with the United States industrial and trade situation. Present conditions are undoubtedly the result of an enormous shifting of demand from commodities required during peace time to those required now, and the appearance of the government's demand for great quantities of goods of many descriptions, which has already developed, is certain to provide a steadying influence which will enable trade to come through the readjustment period successfully. Already this condition is developing. Moreover, the agricultural situation is good, and is helping greatly during these rather critical days. Retail trade of every description seems to be picking up in the farming sections. Shortage of labor is becoming very apparent in the United States, as it has been in Canada, and extensive employment of women is being resorted to wherever possible.

Yellow pine manufacturers are complaining of scarcity of labor and shortage of cars. At the same time they are experiencing a much heavier demand from factories engaged in turning out war goods, as well as from the government for cantonment purposes and for wooden ships. During the past two months shipments of Southern pine have greatly exceeded production, and it is expected that this condition will continue throughout the balance of the present year at least. Most of the orders for cantonment purposes have been filled, but supplementary orders are coming forward daily. As this line of business decreases it is expected that requirements for wooden vessels will increase.

Inland Empire pine manufacturers have plenty of orders on hand at present to keep them operating for some time to come, but new orders are not quite so plentiful as they have been. Improvement is reported in the labor situation, but many of the mills are handicapped by the scarcity of logs. It is expected that a number of them will shut down exceptionally early this fall on this account. The car supply for Western mills is fairly good. Stocks at mill points in the Inland Empire are small. Improvement in the labor situation is also reported by Douglas fir manufacturers, and a number of the larger mills are operating again. Manufacturers still have many big orders on hand, and have been obliged to refuse business recently for rail shipmests. Fall delivery orders are not very large. This is partly explained by the fact that when it was not possible recently to place orders on the coast, buyers who could obtain Southern pine turned their business in that direction. Unless the demand becomes much more active, some of the operators are likely to close down until the beginning of next year. Production of timbers for wooden vessels is being pushed ahead vigorously. Production and orders as a whole are about equal.

It is reported that the United States Government is in the market for 7,500,000 feet of quarter-sawn white oak for aeroplane propellers. There is a scarcity of black walnut and mahogany for this purpose, and the government is expected to purchase large quantities of oak. The war demand for hardwoods continues very strong, particularly

View of Mills in Sarnia.

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Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

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Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

for thick grades of clear stock. The volume of unsold hardwood stocks, both in the North and in the South, shows a decided decrease.

Great Britain

The spot market at London shows no important change, and very few transactions are taking place in the way of forward purchasing. It seems as though there is little prospect of new business to any extent unless it can be arranged on "ex-ship terms," so that the buyer may be certain of what he will have to pay. Transactions taking place are mostly for small quantities necessitated for service requirements. Fresh arrivals almost all go into consumption. Stocks available for winter supplies show scarcely any increase, and a serious situation is feared unless import restrictions are modified. All reports from Liverpool agree to the effect that the government's concessions in connection with imports of spruce deals from Canadian points have come too late to be of any value during the present season. There is little appearance of any appreciable quantity of spruce finding its way to Great Britain from Canada, chartering having been practically absent up to date. More adequate arrangements are necessary without delay if the shortage is to be relieved. The greatest difficulty at present is in connection with war insurance. The heavy rate quoted for sailers being increased to cover the high value of vessels and the greater cost of goods. All this makes it impossible to sell stocks within the price limit prescribed by the government. Some importers are suggesting that the government be urged to remove the restriction upon imports to neutral sailing ships. If other vessels of small tonnage could be used, a small quantity of timber could be moved, and even a few cargoes would be a welcome addition to present stocks.

At Manchester the scarcity of many lines of stock has become acute. Trade at Glasgow continues on a very quiet footing, and must continue so until the government modifies in a substantial manner the drastic import restrictions now existing. The trade is giving this situation a great deal of attention, and a concerted effort is likely to be made to secure more reasonable treatment. All local associations are being asked to co-operate with the Timber Trade Federation in laying the matter thoroughly before the proper authorities. The trade to-day is facing absolute stagnation, unless the government can be prevailed upon to remove or modify the restrictions, particularly those relating to fresh imports. Government requirements of timber must continue on a large scale, and importers at the various large importing centres are looked upon as the logical channels for this business. The tendency of the government, however, has been to take all government business more and more out of the hands of private individuals, without consideration of trade interests. The demand for packing case material continues strong, and merchants' stocks are rapidly being reduced. No fresh supplies of spruce are reaching the market, and there is no prospect of appreciable imports under present conditions.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Ottawa Market Report—The Shell Box Situation

Ottawa, Sept. 7.—(Special to the Canada Lumberman.)—Despite a more or less unpromising outlook, caused by the cessation of shell box orders, a feeling of optimism prevails in the Ottawa lumber market. Stocks of lumber for domestic and local use are not so large as during the corresponding period a year ago, but are sufficient to meet prospective requirements.

With Ottawa plants new orders for shell boxes are not obtainable from the Imperial Munitions Board. The representative of the Canada Lumberman, on enquiry at the Imperial Munitions Board, was informed that the requirements of the board were at present fully covered, and consequently orders had been cut down.

The shell box and labor situation are at present the chief concern of Ottawa lumber manufacturing and woodworking plants. It is suggested by some that the cessation of shell box manufacture in Canada will be followed by a drop in the price of spruce. American orders for spruce, however, may help to maintain the price.

During the latter part of August and the early part of September a lull occurred in the local market. Enquiries, both American and Canadian, showed a tendency to fall off, though some of the firms report that they are keeping up pretty well. Prices for the various grades have not fluctuated much. Mill stocks at present are not so large as a year ago. The quantity on hand at the end of the year, however, may exceed that of 1916, if the mills secure sufficient labor to run until ice forms.

Bush operations are getting well under way, but the labor situation is causing considerable concern. Bushmen in the Ottawa district are very hard to get, notwithstanding the high wages offered.

The export market to England has shown no change for several weeks, and consequently stocks cut for the English trade are heavy.

Logging operations on the Ottawa River, from Ottawa to Chat's Lake, are proceeding about the same as other years. The majority of the logs coming down now are for pulp. Fairly high water prevails, considering the season, which is facilitating towing and providing plenty of power for the sawmills.

The estate of James Davidson, whose plant has been one of the largest producers of shell boxes in the Ottawa district reports that no more shell box orders are coming, and the work on old contracts will terminate about September 15. This will cause 100 or more employees to be let out. About half of the plant will continue to operate on wooden boxes for the commercial trade. The sash and door business is greatly reduced on account of the small extent of local building operations. The sawmill operations of the Davidson mill at Fort Coulonge, P.Q., have proved quite satisfactory, the season's cut having been 10,000,000 feet in the eighteen weeks' run. The bush operations, which will employ 150 men, are now getting well under way. The firm expect to take out 200,000 logs.

This winter's bush cut of the Hawkesbury Lumber Company will only be between 60 and 75 per cent. of their last year's cut. The camps are smaller and the men are later going in. The company report that the labor situation with them is better than they had expected. The Hawkesbury Company is well supplied with logs in the water, which will be available for next season's sawing.

Labor Shortage Restraining Quebec Industry

Montreal, Sept. 11.—(Special to the Canada Lumberman.)—Practically no change has taken place in market conditions, which, however, are not as satisfactory as they were a couple of months ago. The demand is on the quiet side, both for home and United States accounts.

At one time the local building trade promised well, but it has fallen away, due in some degree to the high cost of material and labor. Last month the permits totalled $290,168, a decline of $311,172, while for the eight months the total is $3,601,707, a decrease of $20,153.

A few additional orders for shell boxes have been given out. This part of the industry is by no means busy, owing to the filling of previous contracts. Some factories have little work on hand, and one or two have closed portions of the plant hitherto making boxes for heavy shells.

Enquiries as to prospects for the next cut show that the outlook is not very promising in certain parts of the province. One manufacturer states that, notwithstanding the smaller number of men employed in making munitions, he sees no sign of improvement in the matter of men available for the lumber trade. Conscription, he says, is also making the situation extremely uncertain. It is no use engaging men, to find a little later that they are to be conscripted. It may be that such men would be exempted, but one does not care to take chances, involving the outlay of capital.

Advices from Three Rivers are to the effect that none of the pulp and paper companies has made arrangements with contractors to cut lumber. There is a great scarcity of labor and contractors are not keen to enter into agreements until they are assured that men will be available. It is certain that the cost will be appreciably higher for wages and provisions.

The export business is more active. Fair quantities are going to the United Kingdom and also some to South Africa. Rates, however, have advanced and are now $100 per standard to England. More pine is on the way. It is also now possible to send deck loads, both to England and South Africa, on account of the lighter bulk of the cereal cargoes shipped. There is a scarcity of dock labor, which is likely to be accentuated when conscription comes into effect.

British Columbia timber for shipbuilding purposes is hard to obtain, owing to the heavy requirements of Western shipbuilders. The mills are well booked up with orders and cannot entertain fresh offers from Eastern wholesalers. Prices, too, are very high.

The sulphite and ground wood pulp markets are a little more active, with prices steady. The embargo on sulphur by the United States Government threatened to curtail production of pulp and paper, but it is understood that a two months' supply has now been assured.

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PURE SEPARATED MILK
IN POWDER FORM
FOR ALL COOKING
WHERE MILK IS NEEDED

"Food must be conserved"

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The whole world is facing a shortage of food—everyone must do all they can to economize and conserve the available food supply.

One practical way of eliminating all of the waste of one important food—milk—is by using KLIM in all cooking where milk is needed. Klim is the solids of separated and pasteurized milk reduced to powder form. KLIM does not freeze, spoil, sour or permit of any waste.

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Kirkland & Rose, Vancouver, B.C.
Calgary, Edmonton, Saskatoon, Regina.

Plants: Brownsville, Ont.; Burford, Ont.; Belmont, Ont.; Hickson, Ont.

Original "Dunbar" Machines

We are the original and the only makers of "Dunbar" Shingle Machines, Lath Machines, Clapboard Machines, Steam and Gasoline Logging Engines. Each is the best for its particular work. Are you using the best?

Lath Machine

From our many years of experience we evolved this "Dunbar" Original Lath Machine. Every improvement that could be suggested, every time-tested idea for the betterment of product and for greater speed, has been incorporated in this machine. We believe it has no equal, and there are a great number of mill men throughout Canada who share this belief with us. Carefully constructed of high grade materials and designed to work steadily under the hardest conditions.

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Conditions in Canada necessitate an engine that will stand any amount of strain and hard work in the lumber industry. With this idea in mind we have brought out the "Dunbar" engines perhaps a little stronger than is really needed. They do their work easily and willingly, and stand a great amount of hard usage. Built entirely in Canada for the Canadian lumber trade.

Clapboard Machine

You will need no excuse for the quality of your product if you use the original "Dunbar" Clapboard Machine. Expert in every detail. This machine will give you the very best service under most trying conditions. It will turn out work without delays. It will need practically no repairs and will increase your output. We cannot recommend it too highly because it is giving this very service to lumbermen in all parts of this country.

Send for catalogues of any or all of these machines.

Dunbar Engine & Foundry Co.

WOODSTOCK, N.B.

St. John Markets—No 1918 Contracts Yet

St. John, N.B., Sept. 10; (Special to the Canada Lumberman):—Very much the same conditions apply to the lumber trade at St. John, as two weeks ago. No deals have been shipped by water, or is there any likelihood of any being moved within the next two weeks, although these days no one can tell what may take place from day to day, as the allies may at any moment call for stocks for delivery in England or France. Since the United States entered the war, prices for long spruce and dimension sizes have depreciated very much. Boards are the only line which have not dropped in price, being today in a very firm position, with stocks very low. Short lumber, such as lath, are weak, but $3 is yet obtainable for laths, this being about 50c per M. less than the spring price. Shingles, in the high grades, are not bringing as high a price as early in the season, but low grades are higher, on account of the heavy demand for a cheaper shingle. Stocks at St. John are very low, and no second, or low grade shingles, are to be had.

No prices are obtainable for deals for 1918, but many enquiries are coming on the market for deals at much higher prices than those paid a year ago, and, if present conditions are any gauge, the manufacturer will certainly need the advance. Wages for men for the woods are from $15 to $20 per month higher than last year. Provisions of all kinds are from 25 to 50 per cent. higher. In fact everything touched by the lumberman, except hay, has advanced in price. Men for the woods are scarce and independent. Work is not, and will not be, as efficiently carried on as a year ago.

The operators at St. John are now getting ready to go back in the woods and have already, in some cases, begun the work of cleaning out brooks, erecting camps, etc., preparatory to cutting logs. The cutting of logs this winter will be a pure gamble. No one can tell just what the costs will be, and unless the operator is powerful enough financially to carry himself, he will have to desist, as, at the present no deal buyers are out to purchase ahead for 1918 cut. One thing is certain, however, that more money will have to be paid for deals in 1918 than during this year, or else the manufacturer will operate at a loss.

All the mills at St. John are yet running, but in some cases it will be an early close down with them.

Stocks of any kind will not be heavy at St. John, and will be largely used before spring, as the liners will no doubt carry some during this winter.

Tribute to Sitka Spruce

Sitka spruce is recognized as the most valuable species of wood in the known world for the manufacture of airplanes. The globe has been searched for a substitute, but up to this time no material has been found to take its place, or even approach it.

The lordly Sitka spruce of the Pacific Coast, with trunks often 8 to 15 feet in diameter and 300 feet in height, has its habitat on the shores of the Pacific Ocean, stretching from the California-Oregon line to British Columbia and Alaska, a distance of less than 2,000 miles. The wood is found growing at a distance generally of about thirty miles from the ocean, except in the case of the Columbia River and other large tidal streams, where it is found growing inland at somewhat greater distances, but only in scattered, individual specimens.

Here is a wood that the chiefs of aeronautic science of the world commandeer to make possible the building of their formidable air fleets. To spruce has been accorded the highest privilege for service ever conferred on any wood in the history of the world. It is the autocrat of timbers. Military genius bows before it. Its clean, milky color, fine texture, and wonderful strength, combined with extreme lightness, have given it a place in a world's struggle never enjoyed by any other wood since nations went to war. It bears its responsibilities with grace and ease. Its laurels are easily worn. It is an uncrowned king. Its use value can hardly be measured. Through the creation of great air squadrons the lasting peace of the world is hastened and democracy is made safe. It is a wood which Major R. Perfetti, the head of the Italan special military commission for aeronautics in the United States, says is consecrated by the Creator to ensure the liberty of the world and is the harbinger of peace and good-will among mankind. What a tribute to the value of a piece of wood in fighting the battle of democracy!

Free Maps of Western Homestead Locations

A publication which should prove of considerable interest to prospective settlers in Western Canada has just been issued by the Natural Resources Intelligence Branch of the Department of the Interior. It is known as the "Homestead" Map, and shows graphically the exact location of each quarter-section which is still available for entry under the free government offer of 160 acres. The map has been published in four separate sheets, one each for Manitoba, Saskatchewan, Northern and Southern Alberta respectively, and is available for free distribution in individual sheets or in complete sets.

No Sawmill however small, is complete without a TOWER EDGER

It increases the output of a mill one-third.

It relieves the main saw of a great deal of work, leaving it free to perform its proper function of cutting up logs; and, when the log is disposed of, the edging is also done.

It makes more merchantable lumber per log.

It wastes the minimum quantity of material, saving considerable No. 1 lumber that is lost when the edging is done with the main saw.

It raises the grade of the lumber, removing hearts, shakes, and knots, making firsts and seconds out of commons, and so cutting up every board as to make it as valuable as possible. For example, a board that will grade as No. 2 may be ripped so that one piece goes into the No. 1's and the other into the No. 2's.

It gives the boards straight and parallel edges.

It makes them of standard or any desired special widths, and automatically cuts them scant, exact, or plump, as desired.

It is also used extensively for ripping.

Built in

83 Sizes and Styles 83

This enables you to select a machine perfectly adapted to your requirements and your pocketbook.

HUNDREDS IN USE IN CANADA AND THE STATES.

GORDON HOLLOW BLAST GRATE CO., GREENVILLE, MICHIGAN

Manufacturers of

The Gordon Hollow Blast Grate and the TOWER Line of Edgers and Trimmers.

Camp Supplies

When you have a requisition for groceries for the Camp, always remember that this is where we come in good and strong. We have for many years paid close attention to this branch of our business, and aim to have continually on hand all kinds of goods which would be of interest to the buyer of groceries for the Camp.

Just now, when prices of everything are ruling high, we have a range of moderate priced goods which we feel sure would interest you, and solicit your enquiries for samples and quotations of any lines which you may be in need of.

H. P. ECKARDT & CO.

Wholesale Grocers

Church Street and Esplanade, Toronto

Install a KRAFT SODA MILL

CANADA has another big war opportunity: Great Britain needs more wood pulp. Install a small Soda Pulp Plant and Supply this need by converting your Slats, Tops, Bottoms and waste wood around the Saw Mill into pulp. We can dispose of any amount. Previous sources of supply in Sweden, etc., have recently been withdrawn and Canada now has a free field in Great Britain to market unlimited quantities of wood pulp. We can arrange contracts for long periods.
The cost of installing plant is small and you make a sure profit from waste material.

Write to-day for further details

Becker & Co., Ltd.

34-40 LUDGATE HILL
LONDON, E. C.
ENGLAND

THE
LARGEST IMPORTERS OF
WOOD PULP

We have specialized in Canadian Pulp and have imported ninety per cent. of the Pulp supplied to Europe since 1899.

SOLE AGENTS FOR

CHICOUTIMI PULP CO., Chicoutimi, Canadian Hot Ground Spruce.
LAHAVE PULP COMPANY.
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NOVA SCOTIA WOOD PULP AND PAPER MILLS COMPANY.
RIORDAN PULP AND PAPER CO., Montreal. Easy Bleaching Canadian Sulphite Pulp.
ST. LAWRENCE SULPHITE PULP COMPANY.

Registered

(N) FOR SALE

Trade Mark

Dry Birch

1 1/3 years on Sticks

8/4	1s and 2s	4 Cars
10/4	"	1 "
12/4	"	2 "
8/4	No. 1 Common	3 "
10/4	"	1 "
12/4	"	1 "
8/4	No. 2 Common	4 "
10/4	"	1 "
12/4	"	1 "
8/4	No. 3 Common	4 "
10/4	"	2 "
12/4	"	10 "
16/4	Sound Boxed Hearts	4 "
20/4	" "	1 "
4/4	Log Run, M. C. out	18 "

Birch

1917 Cut

6/4	No. 1 Com. & Bet.	20 Cars
8/4	" "	10 "
12/4	" "	10 "
8/4	No. 2 Common	5 "
12/4	"	5 "
4/4	No. 2 Com. & Bet.	20 "

Quebec Spruce

2 x 4 x 6/16	Merch.	2 Cars
5 x 6/16	"	4 "
6 x 6/16	"	10 "
7 x 6/16	"	2 "
8 x 6/16	"	10 "
9 x 6/16	"	2 "
10 x 6/16	"	5 "
11 up x 6/16	"	2 "
3 x 4/6 x 6/16	Merch.	5 Cars
6 x 6/16	"	5 "
7 x 6/16	"	4 "
8 x 6/16	"	8 "
9/11 x 6/16	"	2 "

1 x 3 up 6/16 Mill Cull 2 Cars
2 x 4 up 6/16 Mill Cull 8 "
3 x 4 up 6/16 Mill Cull 2 "

The Fall is near—the usual shortage of cars will be accentuated; let us ship those orders whilst there is a possibility of securing cars.

If any of the above interest you, will be pleased to quote prices

E. M. NICHOLSON & CO.

202 Board of Trade Building

MONTREAL

Proper Billing of Millwork

A retail lumber dealer, writing to the "Retail Lumberman," takes up the question of the proper bundling of millwork at the factory. This has always been a live problem with the retail dealers, he says. What is needed is systematic and uniform bundling by all the mills. Not only should the mills give consideration to the number of pieces of the different material constituting a bundle, but more attention should also be paid to how and in what manner the bundles are tied. The present custom of the yellow pine mills in bundling lumber is a rank farce.

For example: The writer recently unloaded a car of yellow pine lumber from one of the largest concerns in the business. This car contained eight thousand feet of flooring. This had been tied five pieces to the bundle. When the stock reached our yard more than one-half of the bundles were broken open. The time and material consumed by the mill in bundling this flooring were worse than wasted. The reason for this was the fact that the bundles had been poorly tied and that twine of inferior quality had been used. The stock reached our yard in an unsatisfactory condition, and the cost of handling and piling was greatly increased by the fact that these bundles were broken and the flooring scattered.

This car was no exception; we have often received shipments of flooring, ceiling, etc., where 90 per cent. of the bundles were broken open. Not only are the number of pieces of material to be put into the bundle important, but the manner in which the bundles are tied and the quality of the twine used in tying same is of vastly more importance. The condition in which all lumber is received at the retail yard has to do with the satisfactory selling of the same, and it is an imposition to ask our customers to take lumber that has been damaged by rough handling, becoming dirty and marred by reason of broken bundles, as is so often the case.

The fact that the retailer has recourse on the railroad for any damage to material in transit is not sufficient reason for the manufacturer to continue the habit of tying bundles carelessly or with poor, flimsy twine, as is so often the case.

The careless handling of local shipments for the retail yards by the transportation companies is another custom that is becoming almost unbearable by the dealers. It is no uncommon thing to receive local shipments of mouldings sash, columns, and even ready roofing in such damaged condition as to render it unfit for use. The fact that we have relief in the matter of a claim against the railroad for damage offers very little consolation to the customer who has probably already been waiting for weeks on this material and is badly needing the same.

It is a very uncommon thing to receive a local shipment of mill work in perfect condition. Of course, in some instances the factory is to blame for not securely bundling or crating their shipments, but there is very little fault to find along this line. The trouble lies with the employees of the railroads, who have no regard whatever for the manner in which they handle the material entrusted to their care. We have often wondered how the roads can continue to pay the large number of claims continually being filled by their customers for damage to goods in transit. In every retail yard in the country there is a lot of this damaged material piled up in the warehouse—mute evidence of the rough handling it has received at the hands of the freight handlers.

These are trying times and conditions for the managers of the retail lumber yards. In the face of the existing high prices of material and with every indication that it will go still higher, the problem of getting the business, satisfying our customers, and at the same time making our sales show a reasonable amount of profit is one that is decidedly interesting, to say the least. The average rural buyer of lumber and building material is not informed as regards the market conditions. They do not buy much material during the winter months, and just now many of them are coming in to the market for the first time this year, and they naturally base their judgment regarding prices on the basis on which they secured the same commodity last fall.

These rural customers have a peculiar and unreasonable way of reasoning on this price proposition. They know full well that the value of all commodities, and especially all the products of the farm, has leaped upward at an astonishing rate. The same products of the farm to-day will buy twice as much building material as the same products would have purchased a year ago. Not that building material has not advanced in price, for it has—in many cases quite radically—but the products of the farm have advanced in price so much faster that the ratio has not been maintained.

An example of the changed condition: A few months ago a farmer would bring to market two wagon loads of corn, oats, or wheat and take home one wagon load of lumber, or other building material, with the receipts. To-day the farmer can bring to town one wagon load of the same commodities and take home two wagon loads of lumber or other building material in exchange. This is also true as it relates to live stock, poultry, etc.

We have no quarrel with our farmer customers because the prices of their products are higher and bring them more money than ever before. What we object to is the fact that many of them will not "tote

NEW ZEBRA, WOOD, WESTERN UNION, and PRIVATE CODES USED.

Telephones:
1391 Long Distance.
400 Private Branch Exchange.

Cables:
"HILLAS," HULL

W. N. HILLAS & COMPANY

WOOD BROKERS

FOR EVERY CLASS OF TIMBER

***Head Office*: HULL, England**

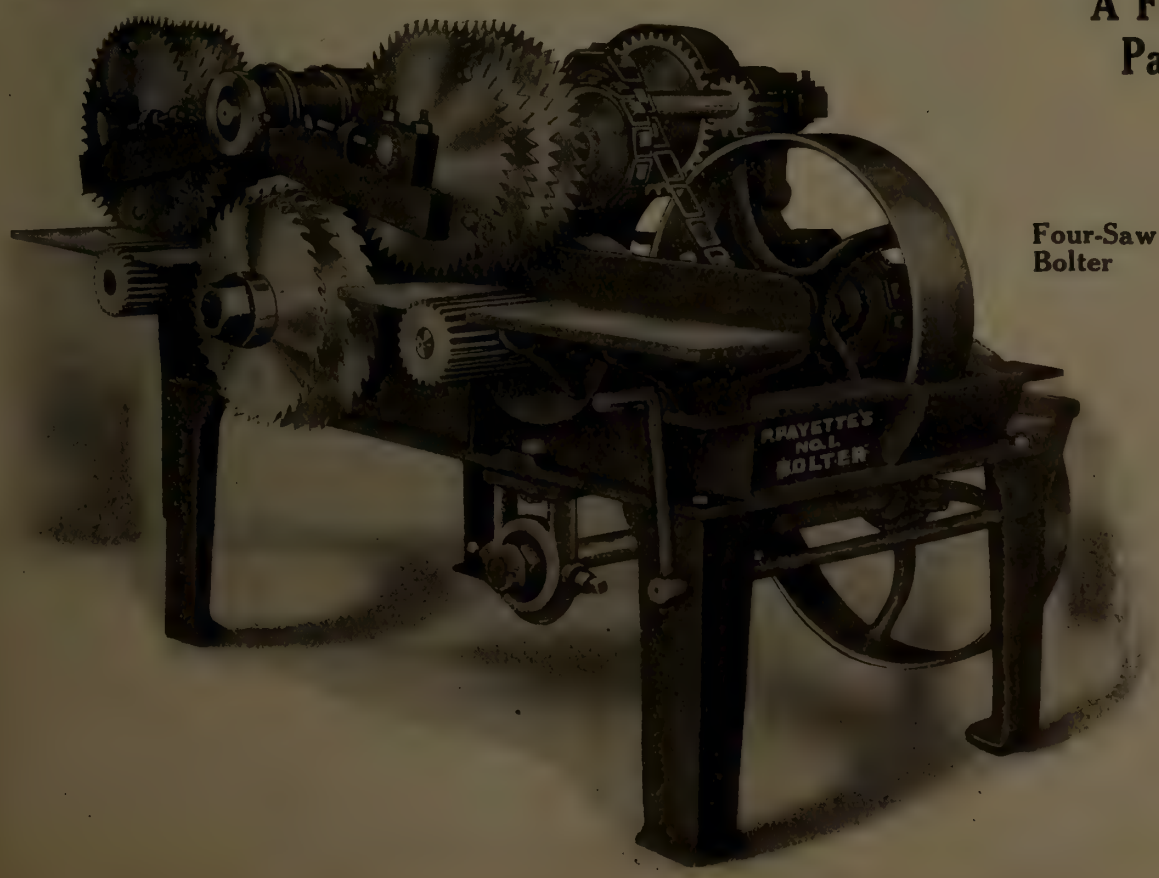
To the Lumber Companies of Canada:

You have the Goods. Place your Lists with full particulars in our hands. We are in daily touch with all the Buyers in the United Kingdom.

PLEASE NOTE.—We pay cash against all documents, and take the whole of the Delcredere risk on Buyers.

128,350 Laths in Ten Hours

Our Lath-Mill and Bolter have made a test cut in ten hours of 128,350 four foot laths, 1½ in. by ⅜ in., counted, tied and piled.



Four-Saw Bolter

A Few of the "400" who use Payette's Lath-Machinery:

Graves, Bigwood Co., Byng Inlet, Ont.
Victoria Harbor Lumber Co., Victoria Harbor, Ont.
Georgian Bay Lumber Co., Waubaushene, Ont.
Colonial Lumber Co., Pembroke, Ont.
Theo. A. Burrows, Grand View, Man.
Wm. Milne & Sons, North Bay, Ont.
C. Beck Mfg. Co., Penetanguishene, Ont.
Manley Chew, Esq., Midland, Ont.
Chew Bros., Midland, Ont.
James Playfair Co., Midland, Ont.
McFadden & Malloy, Spragge, Ont.
Pembroke Lumber Co., Pembroke, Ont.
Petawawa Lumber Co., Ltd., Pembroke, Ont.
Firstbrook Box Co., Penetang, Ont.
Gres Falls Lumber Co., Three Rivers, Que.
Foley Bros. & Northern Coast Co., Scot, Ont.
Spanish Mills Lumber Co., Ltd., Cutler, Ont.
Spanish Mills Lumber Co., Spanish Station, Ont.

P. Payette Co.

Engineers and Machinists,

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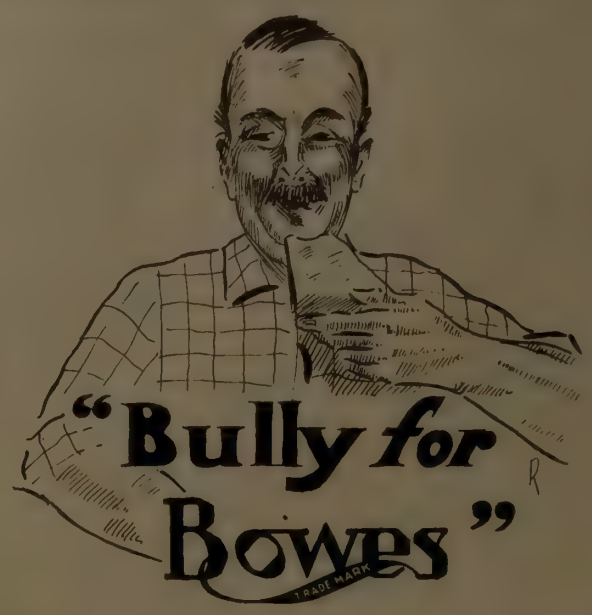


LUMBERMEN WORK ON THEIR STOMACHS

What we mean is that they work better if well fed than they do if poorly nourished. Of course you realize this and you also realize the advisability of keeping your expenses down.

By making your food purchases from us you can feed your men on the best at the least possible expenditure.

We are quoting you on a few items here and would be glad to give you prices on any of our other lines.

BOWES STANDARD QUALITY MINCE MEAT

12 lb. pails—net weight, per lb.	13c
28 lb. pails—net weight, per lb.	12c
65 lb. tubs—net weight, per lb.	11¾c
In barrels about 500 lbs., per lb.	11½c

BOWES WORCESTERSHIRE SAUCE

6 oz., packed 3 doz. to crate, per doz.	$1.35
12 oz., packed 3 doz. to crate, per doz.	$2.20
Jugs, Imperial Gallon ... per gal.	$1.20

BOWES JAMS AND JELLIES

Fig and Apple Jam, per lb.	.08½c
Fig and Lemon Jam, per lb.	.08½c
Compound Jam, Specially good, always uniform, any flavor, per lb.	.12c
Bakers' Special Jam, Extra heavy blend. In any flavor, per lb.	.13c

Our other lines are—

Maple Syrup, Table Syrup, Baking Powder, Butter, Eggs and Egg Products, Cheese, Canned Fruits, Figs, Raisins, Currants, Powdered and Condensed Milk, etc.

WRITE FOR PRICE LISTS

THE BOWES COMPANY, LTD.

Head Office—TORONTO, ONT.

fair" with the lumberman, and in a spirit of the square deal gladly and willingly pay us a little more for their needs in our lines when the advance on the same has only been a shadow as compared to the radical advance upon their products. It takes time to line the buying public up on the new conditions, but as the dear public is the winner, under present conditions, everythng will come out all right and everybody will be happy.

The retail lumber dealers, as a rule, are always too anxious for business. When a prospective customer comes into the market for a bill of material there is always some dealer who is ready and willing to make a cut in the price of his bill and tie the business up quickly. This is the same old story of acting in haste and repenting at leisure. A case of this nature is at hand. Early last spring there was a customer in our town who decided he would do some cement work, and he was in the market for a car of portland cement. He readily found a dealer who was willing to name him an extremely low price on the car of cement, and the sale was made. Time passed, and this customer's wants in the cement line grew smaller and smaller. Instead of using the car his cement wants consisted of some two hundred sacks; the remainder of his car were left on his hands. In the meantime cement prices advanced, and the customer in question would not return his unused cement to the dealer for credit, but sold it at retail, basing the selling price on the cost of the cement at the time he made the purchase.

As a result of this transaction the cement market in this locality has been upset for the last two months and the local dealers are paying the price of selling too much cement to an unscrupulous customer. Had due time and consideration been taken in making the sale referred to, all the bother and loss of profit attendant upon this transaction would have been avoided; the customer would have paid a fair price for his cement needs and would have purchased only the amount required for his job. Undue anxiety on the part of the dealers to sell prospective customers has cost the dealers thousands of dollars in lost business and a corresponding loss of profit. We as retail dealers should "keep our heads" when there is material to be sold and not bite our nose off to spite our own face, as was the result in the transaction referred to above.

The desire to secure more than his fair portion of the local business has got many a retailer into serious trouble. The golden rule is undoubtedly an excellent standard of business ethics, and if applied to our business will solve practically all of our competitive troubles.

Central Station Uses Refuse Wood for Fuel

In the report of the "Committee on Progress" of the National Electric Light Association is given a short description of a contract of unusual nature and of mutual advantage, being successfully carried out by the Oregon Power Company and the Booth-Kelly Lumber Company, of Springfield, Ore. The latter company operates a large sawmill and planing mill, and, by means of conveyors and blower systems, transmits a portion of the refuse wood to the adjacent plant of the central station company. The power company pays $0.005 per kw.-hr. at the switchboard to the lumber company for all energy generated, and the lumber company in turn pays $0.009 per kw.-hr. for the first 1,000,000 kw.-hr. used in each current year, and $0.008 per kw.-hr. for all over this amount. The contract further calls for a minimum usage on the part of each party to the agreement. For instance, the power company agrees to purchase sufficient fuel to generate a minimum of 3,000,000 kw.-hr. per annum in excess of the amount used by the lumber company, and the latter agrees to use a minimum of 1,500,000 kw.-hr. per annum to operate 76 motors in and about its mills.

The steam required by the dry kilns, heating the offices and operating devices about the sawmill, for which electricity has not as yet taken the place of steam, is secured also from the Oregon Power Company. This steam is used in such quantities as to require an 8-in. pipe with boiler pressure of 150 pounds to supply it, and is purchased at a flat rate of $45 per month. This appears to be a very low rate until it is understood that no account is taken of the fuel to generate this steam. In other words, the lumber company pays $45 per month for the use of the boilers of the power company and furnishes the fuel.

The average energy consumption of the lumber mill is about 8,500 kw.-hr. a day, and approximates daily 40 per cent. of the connected load, which was the load factor figured on when building the plant. In addition to this energy used by the Booth-Kelly Company, the central station generates for commercial purposes from 250,000 to 500,000 kw.-hr. per month. In the accounting at the end of the month the power company pays the lumber company from $700 to $1,200, after satisfying its account for energy used.

Advices recently received from British Columbia state that the strike in the shingle mills of New Westminster and surrounding district has died a natural death, and that all the mills are again running on full time.

Lumbermen's and Railroaders' Clothing

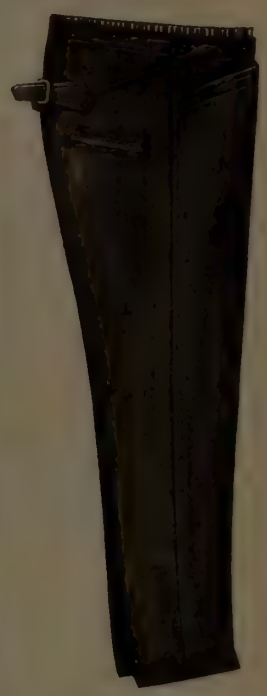
Guaranteed Pure Wool Mackinaw Coats, Pants, Shirts, Mitts Socks, Underwear, Etc., of the Highest Grades.

Plain and Fancy Pure Wool Mackinaw Coats, with high seven-inch collar, close fitting, with tab at throat. Sizes 36 to 46.

Smart-Woods Home-made, Hand-knit Wool Mitts, as cut. Generous sizes, perfectly proportioned. For use with large fitting pullovers.

All-Wool Long Stockings, as cut. Black or fancy striped or checked.

Our Special Muleskin, Calfskin and Horsehide Gloves have fully reinforced cuffs and are heat and wetproof. Ask for samples and prices.



Men's Heavy Pure Wool Mackinaw Pants, as cut. Black, Khaki, and Olive-Green shades. Generous sizes, well made.

Write for our Catalogue

Smart-Woods LIMITED

Ottawa — Toronto
Montreal — Winnipeg

JENCKES BOILERS

Boiler Room of Dryden Timber & Power Co., Dryden, Ont., containing six 78 in. x 20 ft. Jenckes Tubular Boilers.

Enquiries addressed to our nearest sales office will receive prompt attention.

for prompt shipment subject to prior sale.

72 x 18	H. R. T. Boiler	150 lbs.	Ont.
60 x 16	" "	135 "	"
60 x 14	" "	125 "	"
2—60 H.P.	Loco. Type	125 "	"
2—50 H.P.	" "	140 "	"
2—50 H.P.	" "	125 "	"
2—50 H.P	" "	120 "	Alta.
3—30 H.P.	Vertical "	100 "	Ont.
6—25 H.P.	" "	100 "	"
8—20 H.P.	" "	100 "	"
4—15 H.P.	" "	100 "	"
3—12 H.P.	" "	100 "	"

The Jenckes Machine Co., Limited

SHERBROOKE — MONTREAL, 908 E.T. Bank Bldg. — COBALT — TORONTO, 710 C.P.R. Bldg. — ST. CATHARINES — VANCOUVER, 616 Standard Bank Bldg.

Works: SHERBROOKE, QUE.; ST. CATHARINES, ONT.

The EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS-DIEU-RIEN
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Head Office at Montreal.

SPRUCE
ROUGH or DRESSED

Saw Mills at
MONT LAURIER, QUE.
STE. MARGUERITE, QUE.

Dressing Mills at
ST. JEROME, QUE.

Northern Office:
MIDLAND, ONT.

Southern Office:
HATTIESBURG, MISS.

Herman H. Hettler Lumber Co.
2601 Elston Ave., CHICAGO, ILL.
Manufacturers and Dealers
White Pine, Red Pine and Yellow Pine,
Lumber and Lath
Excellent Planing Mill Facilities. Prompt Shipments.

CEDAR
Shingles

Campbell, MacLaurin Lumber Co.
Limited
Board of Trade Building, MONTREAL

SPRUCE AND **BIRCH**
GOOD STOCKS PROMPT SHIPMENTS SATISFACTION
C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber, Lath and Shingles
Offices—McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

John A. McIntyre, Rodney, Ont., will commence preparing plans in a week or ten days for the erection of a planing mill. It is probable that new machinery will be required.

The Midland Shipbuilding Company, Midland, Ont., has been incorporated, with capital stock of $1,000,000. They will build ships and operate dry docks, etc. N. L. Playfair is interested.

William Williamson, 137 Woodbine Avenue, Toronto, Ont., is having plans drawn for the erection of a planing mill, to cost $4,000, at 601 Woodbine Avenue. The building will be one storey, frame construction, shingle roofing, electric lighting, etc.

The Boivin Tie and Lumber Company, Ltd., has been incorporated, with head office at Timmins, Ont., and capital stock of $40,000, to carry on business as timber merchants, sawmill proprietors, timber growers, etc. The provisional directors are F. A. Day and W. A. Gordon.

The Collingwood Steamship Company has been incorporated, with head office at Collingwood, Ont., and capital stock of $40,000, to carry on business as builders of wooden and steel vessels; also to erect wharves, docks, etc. The provisional directors of the company are N. L. Playfair, Midland, Ont.; M. Smith, T. C. Luke, and T. A. Sharp.

The Parry Sound Lumber Company's sawmill, tramway, and part of the dam, together with a small quantity of lumber, were destroyed by fire on September 11. The fire broke out about 2 o'clock. The cause is a mystery, as the night watchman made the rounds every hour. No estimate can yet be given of the loss, but it was fully covered by insurance.

The Schroeder Mills and Timber Company is operating extensively in timber limits along the Pickerel River, in the Townships of Blair and Mowat, Parry Sound District, Ontario. The company is employing 750 men there, and will take out white pine logs. Its cut this winter will be about 25,000,000 feet, which will be disposed of to mills in the Georgian Bay District.

The plant of the Goderich Manufacturing Company, Goderich, Ont., was recently destroyed by fire, the loss amounting to $80,000, with insurance of $76,000. Originally the plant was constructed for the manufacture of furniture, but for some time it has been used for the production of boxes for the William Davies Company, Toronto. The plant was a three-storey brick building, owned by Edward Baechler. The company will rebuild at an early date.

Eastern Canada

Veneers and Panels, Ltd., Montreal, P.Q., have obtained a provincial charter.

Seney & Co., Victoriaville, P.Q., have been registered. E. and A. Seney are interested.

Price Brothers & Co., Ltd., are enlarging their mills at Jonquiere and Kenogami, P.Q.

The assets of F. X. Quevillon, sash and door manufacturer, Montreal, P.Q., have been advertised for sale by tender.

The assets, stock, and good-will of Fraser Limited, Fredericton, N.B., have been sold to Fraser Companies, Ltd., which has been organized for that purpose.

The pulp mill of the New Brunswick Sulphate Fibre Company at Millerton, which was burned and rebuilt, is now operating again. The production is 15 tons daily. About 100 men are employed, and this number will probably be increased.

The Three Rivers Shipyard Company, Three Rivers, P.Q., have commenced work upon laying out their yard, at a cost of $125,000. They intend to build wooden vessels of 5,500 tons dead weight. Messrs. Kirkwood & Son, Three Rivers, are the owners of the business.

The St. John Shipbuilding Company, St. John, N.B., have plans in progress for the erection of a shipbuilding plant. The engineer is Mr. J. L. Smith, Montreal, P.Q., and he is engaged in laying out the company's yard and making plans for the erection of a modern plant.

Damage estimated at $15,000 has been caused by fire to the box factory of Holmes, Hogue & Co., Chatham Street, Montreal. The factory had been closed for a short time following the death of Mr. J. Arpin, a former partner, and, pending the reorganization of the company, under the name of Holmes, Hogue & Co.

The Parker Pulpwood and Timber Company, Ltd., has been incorporated, with head office at Montreal, P.Q., and capital stock of $49,000, to carry on business as manufacturers of and dealers in logs, lumber, timber, pulp, pulpwood, etc., Those principally interested are W. W. Skinner, K.C., G. G. Hyde, and W. G. Pugsley, advocates, all of Montreal.

Work is to start immediately on the shipyard and machine shop of the

Three Rivers Shipyard Company (Kirkwood & Son), Three Rivers, P.Q., which is to cost $15,000. The plant will be two storeys, 75 ft. x 170 ft., concrete foundation, two water slips, 500 ft. long, built on piles. The owners will do their own work.

Duncan C. Scott,, Deputy Superintendent-General of Indian Affairs, reports that no sale of the Fairy Lake timber, in the Counties of Queens and Annapolis, N.S., has been made. This timber was advertised for sale, and sealed tenders were called for up to September 5. It is presumed that tenders received were considered to be too low.

Over 5,000 acres of timber limits were offered for sale recently by the Quebec Government in the St. Maurice and Lake St. John regions, but some 4,300 acres had to be withdrawn, as there was no bid. The average price of the 800 square miles that were sold was $440 a mile—about $100 higher than the previous record. The buyers were adjoining limit-holders.

The British and French Paper Stock Company, Ltd., has been incorporated, with head office at Montreal, P.Q., and capital stock of $10,000, to carry on business as lumbermen, manufacturers of and dealers in logs, lumber, timber, pulp, pulpwood, paper, etc. Among those interested are L. Macfarlane, K.C., J. MacNaughon, advocate, and J. G. Carwright, office manager, all of Montreal.

Western Canada

The Williams shingle mill at Jardine, B.C., was recently destroyed by fire.

John Grenz & Co., lumbermen, Estuary, Sask., recently suffered a loss by fire.

The new export mill of the Canadian Robert Dollar Company, on Burrard Inlet, is now in operation.

A fire in the vicinity of O'Neill's mill, Woodbury Creek, near Nelson, B.C., recently destroyed the company's mill flumes.

The Wabling Lumber Company, Edmonton, Alta., has been incorporated, with capital stock of $20,000. Correspondence should be addressed to A. S. Matheson, 10231 One Hundred and Twenty-ninth Street, Edmonton, Alta.

A boiler explosion at the plant of the Vedder River Shingle Company, Ltd., Vedder River, B.C., recently put it out of commission for a couple of weeks.

John Angevine, of Seattle, and J. H. Sinclair, of Vancouver, have purchased the mill at Tyee Siding, north of Victoria, B.C., which was recently operated by H. A. Stewart, of Vancouver.

Fire in the Campbell River district, British Columbia, recently destroyed five million feet of logs belonging ot the International Lumber Company, four donkey engines, and some railway track. The damage is estimated at $35,000.

J. A. Nowell, of St. Paul, has sold 1,520 acres of timber near Salmo, Kootenay District, to John Waldbeser, of the Emerald Mine, who wants the timber for mining purposes. This land is part of the Nelson and Fort Sheppard Railway grant.

The Kootenay Shingle Company, Salmo, B.C., recently suffered a loss by fire. Forest fires in the Kootenay Boundary swept over a cedar flat near Salmo and destroyed between 2,000 and 3,000 cords of shingle bolts, representing the company's season's cut.

The Hansard Lake Lumber Company, Ltd., has been incorporated, with head office at Prince George, B.C., and capital stock of $25,000, to carry on business as timber merchants, sawmill proprietors, lumbermen, and shingle manufacturers.

A company consisting of Seattle, Portland, and Bellingham interests is arranging to establish a plant on the Fraser River, near New Westminster, B.C., for the production of shingles and sash and doors. Mr. John F. Langan is interesed in the undertaking.

Sealed tenders are being received by the Minister of Lands for British Columbia until Oct. 4, 1917, for the purchase of License X1039, to cut 2,259,000 feet of spruce, balsam, and fir on an area known as Lot 3063, situated near Aleza Lake, Cariboo District. Three years will be allowed for the removal of the timber.

Sealed tenders are being received by the Miniser of Lands for British Columbia until Sept. 29, 1917, for the purchase of License X646, to cut 1,542,000 feet of fir and cedar on the head of Pitt Lake, New Westminster District, adjoining T. T. L. 7558P. Two years will be allowed for the removal of the timber.

A Vancouver despatch states that a petition for the winding up of the Fernie Lumber Company, of Fernie, B.C., has been filed in the Supreme Court there on behalf of the Imperial Bank, who, it is said, are creditors to the company to the sum of $288,139. The company was organized in May, 1904, with a capital of $800,000. Their large mill at Fernie, B.C., has been closed for four years.

Mr. I. T. T. Paxton, receiver and manager of the British Columbia Lumber Corporation, Ltd., reports that he has sold the machinery in the corporation's sawmill at Coal Harbor, Vancouver; also lot 111, Port Moody, a Dominion berth of 640 acres, containing approximately 24,000,000 feet of superior cedar and fir at $60,000. It is understood that the purchasers, the Warren Timber Company, Ltd., will commence logging the tract immediately.

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In reply to yours of the 18th, we are pleased to state that the No. 91 Matcher is giving excellent results in surfacing stock two or four sides at a feed of 250 feet per minute and in running pattern stock, such as shiplap, drop siding, etc., at 150 lin. feet per minute. The machine has been giving us no trouble in operation and its work, at the speed mentioned, is, we think, beyond criticism.

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J. B. Keyes, Gen. Mgr.

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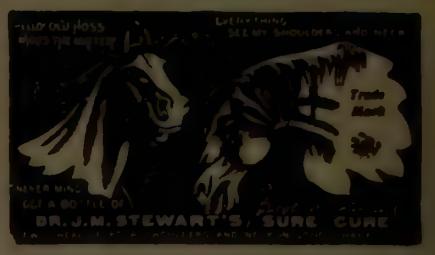

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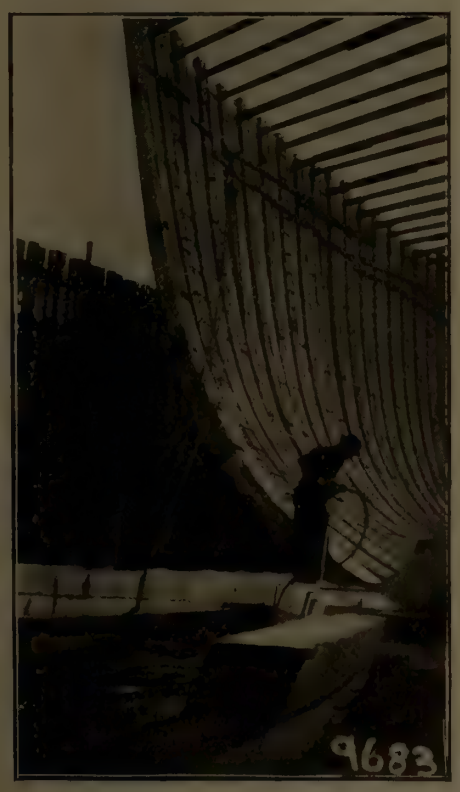

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2-in. No. 1 cuts and better	64 00	66 00
1½-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	52 00	54 00
4/4 No. 2 and 3 cuts		33 00
5/4 and 6/4 No. 2 and 3 cuts	42 00	44 00
8/4 No. 2 and 3 cuts	44 00	46 00
1-in. Good Shorts		45 00
1 x 4 and 5 com. and dressing	37 00	38 00
1 x 6 common and dressing	39 00	40 00
1 x 8 common and dressing	40 00	41 00
1 x 10 common and dressing	44 00	46 00
1 x 12 common and dressing	48 00	50 00
1 x 10 and 12 mill cull stocks	33 00	35 00
1-in. mill cull sidings	30 00	32 00
5/4 and 6/4 x 4 m.r., m.c. out	38 00	40 00
5/4 and 6/4 x 5 m.r., m.c. out	38 00	40 00
5/4 and 6/4 x 6 m.r., m.c. out	39 00	41 00
5/4 and 6/4 x 8 m.r., m.c. out	39 00	41 00
5/4 and 6/4 x 10 m.r., m.c. out	45 00	47 00
5/4 and 6/4 x 12 m.r., m.c. out	48 00	50 00
2 x 10 common	37 00	39 00
2 and 3 x 12 common	39 00	41 00
1 x 8 inch box and common	35 00	37 00
1 x 10 inch box and common	36 00	38 00
1 x 12 inch box and common	38 00	40 00
1-in. mill run sidings	40 00	42 00
1-in. mill run shorts	33 00	35 00
1-in. mill run Norway	31 00	32 00
2-in. mill run Norway	33 00	35 00
Norway, c. and cf. 1-in.	40 00	42 00
Norway, c. and cf. 1½-in.	42 00	44 00
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Spruce mill run 1-in. and 2-in.	33 00	35 00
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1 x 4 and 5-in. x 9 to 16 ft.		27 00
1 x 6-in. x 9 to 16 ft.	30 00	31 00
1 x 8-in. x 9 to 16 ft.	32 00	33 00
1 x 10 and 12 in. x 9 to 16 ft.	32 00	33 00
1 x 7, 9 and 11 in. x 9 to 16 ft.	30 00	31 00
1 in. No. 2, 6-ft. to 16-ft.	24 00	25 00
2 x 4 to 12, 10 and 16 ft.	30 00	31 00
2 x 4 to 12 ft., 12 and 14 ft.	30 00	31 00
2 x 4 to 12 in., 18 ft.	32 00	33 00
2 x 4 to 12 in., 20 ft.	33 00	34 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	24 00	25 00
Clear in. B.C. cedar, kiln dried	50 00	55 00

Douglas Fir:

Dimension Timber up to 32 feet:

8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	43 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16	44 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.	44 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.	45 00
10x20, 18x20, up to 32 ft.	45 50
6x18, 8x18, up to 32 ft.	45 50
6x20, 8x20, up to 32 ft.	45 00

Timber in lengths over 32 feet subject to negotiation.

Fir flooring, 1 x 3, edge grain	43 50
Fir flooring, 1 x 4, edge grain	46 50
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No. 1 and 2, 1-in. clear Fir rough	50 75
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No. 1 and 2, 2-in. clear Fir rough	52 00
1½-in. No. 1, 4-ft. pine lath	6 00
1½-in. No. 2 4-ft. lath	5 70
1½-in. 32-in. pine	2 75
1½-in. No. 1 4-ft. hemlock lath	4 50
1½-in. mill run hemlock lath	4 25
XX B. C. cedar shingles	3 05
XXX 6 butts to 2-in.	4 20
XXXXX	4 75

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2 in.		75 00
Ash, white, No. 1 common		50 00
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Ash, brown, com. and bet.		50 00
Ash, brown, 1sts and 2nds, 6/4 and 8/4		70 00
Birch, 1st and 2nds, 4/4		58 00
Birch, No. 1 com. and bet., 4/4		47 00
Birch, 1st and 2nds, 6/4 and 8/4		65 00
Birch, 1st & 2nds, 10/4 and 12/4		78 00
Birch, 1st and 2nds, 16/4		85 00
Basswood, 1sts and 2nds, 4/4		53 00
Basswood, No. 1 com. and bet., 4/4	45 00	47 00
Basswood, No. 2 and 3 common		28 00
Basswood, 6/4 and 8/4, 1sts and 2nds	58 00	60 00
Basswood, 6/4 and 8/4, com. and bet.		53 00
Basswood, 4/4, No. 2 com. and bet.		42 00
Soft elm, 1sts and 2nds, 4/4		48 00
Soft Elm, No. 1 com. and bet., 4/4		43 00
Soft Elm, No. 2 and 3 common		20 00
Soft Elm, 6/4 and 8/4, 1 and 2		60 00
Rock Elm, 1sts and 2nds, 6/4 and 8/4		65 00
Rock Elm, No. 2 com. and bet., 6/4 and 8/4		45 00
Soft Maple, 1sts and 2nds, 4/4		48 00
Soft Maple, com. and bet., 4/4		38 00
Soft Maple, 6/4 and 8/4, 1sts and 2nds		55 00
Hard Maple, 1sts and 2nds, 4/4		47 00
Hard Maple, com. and bet., 4/4		42 00
Hard Maple, 12/4, 1sts and 2nds	65 00	70 00
Hard Maple, 16/4, 1sts and 2nds	85 00	90 00
Red Oak, plain, 1sts and 2nds, 4/4		64 50
Red Oak, plain, No. 1 com., 4/4		44 50
Red Oak, plain, No. 2 com., 4/4		33 50
Red Oak, plain, 1sts and 2nds, 6/4 and 8/4		72 00
Red Oak, plain, 1sts and 2nds, 12/4 and 16/4	90 00	95 00
White Oak, plain, 1sts and 2nds, 4/4		64 50
White Oak, plain, No. 1 com., 4/4		44 50
White Oak, plain, No. 2 com., 4/4		33 50
Red and White Oak, plain, 1sts and 2nds, 5/4 and 6/4	65 00	68 00
Red and White Oak, plain, No. 1 com., 5/4 and 6/4		48 00
Red and White Oak, plain, No. 2 com., 5/4 and 6/4		35 00
Red and White Oak, plain, 1sts and 2nds, 8/4		70 00
Red and White Oak, plain, No. 1 com., 8/4		50 00
White Oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00	85 00
White Oak, ¼ cut, 1sts and 2nds, 4/4		89 00
White Oak, ¼ cut, 5/4 and 6/4 1sts and 2nds		92 00
White Oak, ¼ cut, No. 1 com.		57 00
Hickory, 1sts and 2nds, 4/4		72 00
Hickory, 6/4, 1sts and 2nds		80 00
Hickory, 8/4, 1sts and 2nds		85 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$55 00	57 00
1¼-in. and 1½-in. x 8-in. & up	70 00	72 00
2-in. x 7-in. and up	72 00	74 00
No. 2 cuts 2 x 8-in. and up	45 00	48 00
Pine good strips:		
1-in.	45 00	48 00
1¼-in. and 1½-in.	55 00	56 00
2-in.	56 00	57 00
Pine good shorts:		
1-in. x 7-in. and up	45 00	50 00
1-in. x 4-in. to 6-in.	32 00	34 00
1¼-in. and 1½-in.	53 00	55 00
2-in.	54 00	56 00
7-in. to 9-in. A sidings	30 00	32 00
Pine, No. 1 dressing sidings	42 00	45 00
Pine, No. 1 dressing strips	40 00	42 00
Pine, No. 1 dressing shorts	34 00	36 00
Pine, 1-in. x 4-in. s.c. strips		36 00
Pine, 1-in. x 5-in. s.c. strips		37 00
Pine, 1-in. x 6-in. s.c. strips		38 00
Pine, 1-in. x 7-in. s.c. strips		38 00
Pine, 1 x 8-in., s.c., 12 to 16 ft.		38 00
Pine, 1-in. x 10-in. M.R.		39 00
Pine, s.c. sidings, 1½ and 2-in.	30 00	42 00
Pine, s.c. strips 1-in.		33 00
1¼, 1½ and 2-in.	36 00	37 00
Pine, s.c. shorts, 1 x 4 to 6 in.	29 00	30 00
Pine, s.c. and bet., shorts 1 x 5		32 00
Pine, s.c. and bet., shorts, 1 x 6		33 00
Pine, s.c. shorts, 6′-11′, 1″x 10″		36 00
Pine box boards:		
1″x 4″ and up, 6′-11′		26 00
1″x 3″, 12′-16′		26 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up		28 00
and up, 6-ft. to 11-ft.		26 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.		25 00
O. culls r & w p	18 00	20 00
Red Pine, log run:		
mill culls out, 1-in.	28 00	30 00
mill culls out, 1¼-in.	28 00	30 00
mill culls out, 1½-in.	28 00	30 00
mill culls out, 2-in.	28 00	30 00
mill culls, white pine, 1″x 7″ and up	29 00	30 00
Mill run Spruce:		
1″x 4″ and up, 6′ 11′	24 00	25 00
1″x 4″ and up, 12′-16′		30 00
1″x 9″-10″ and up, 12′-16′		36 00
1¼″x 7″ 8-9″ and up, 12′-16′		35 00
1¼″x 10″ and up, 12′-16′		36 00
1½″ & 2″x12″ and up, 12′-16′		40 00
Spruce, 1-in. clear (fine dressing and B)		37 00
Hemlock, 1-in. cull	18 00	20 00
Hemlock, 1-in. log run	23 00	24 00
Hemlock, 2x4, 6, 8, 10, 12/16′	26 00	28 00
Tamarac	24 00	26 00
Basswood, log run, dead culls out	30 00	40 00
Basswood, log run, mill culls out	26 00	28 00
Birch, log run	30 00	32 00
Soft Elm, common and better, 1, 1½, 2-in.	25 00	30 00
Ash, black, log run	32 00	40 00
1 x 10 No. 1 barn	40 00	45 00
1 x 10 No. 2 barn	38 00	40 00
1 x 8 and 9 No. 2 barn		38 00
Lath per M:		
No. 1 white pine, 1½-in. x 4-ft.	[illegible] 50	5 75
No. 2 white pine		5 25
Mill run white pine		5 50
Spruce, mill run 1½-in.		5 00
Red pine, mill run		4 75
Hemlock, mill run		4 00
32-in. lath		2 25
White Cedar Shingles:		
xxxx, 18-in.		5 00
Clear butt, 18-in.		4 00
18-in. xx		2 25
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

White Pine

	cts.	
First class Ottawa waney, 18-in. average, according to lineal	60	65

Oak

According to average and quality	60	70

Elm

According to average and quality, 40 to 45 feet	80	85
According to average and quality, 30 to 35 feet	50	60

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Birch Planks

1 to 4 in.	20 00	25 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.		$74 00
1 in., 8 in. and up wide		83 00
1¼ and 1½ in. and up wide		86 00
2 in. and up wide		88 00
Cuts and Better		
4/4 x 8 and up No. 1 and better		58 00
6/4 x 8 and up No. 1 and better		70 00
8/4 x 8 and up No. 1 and better		72 00
6/4 x 6 and up No. 2 and better		61 00
8/4 x 6 and up No. 2 and better		63 00
6/4 x 6 and up No. 3 and better		55 00
8/4 x 6 and up No. 3 and better		59 00
No. 1 Cuts		
1 in., 8 in. and up wide		50 00
1¼ in., 8 in. and up wide		59 00
1½ in., 8 in. and up wide		61 00
2 in., 8 in. and up wide		64 00
2½ and 3, 8 in. and up wide		84 00
4 in., 8 in. and up wide		90 00
No. 2 Cuts		
1 in., 6 in. and up wide		36 00
1¼ in., 6 in. and up wide		47 00
1½ in., 6 in. and up wide		48 00
2 in., 6 in. and up wide		49 00
2½, 3 and 4 in., 6-in. and up wide		68 00
No. 3 Cuts		
1 in., 6-in. and up wide		30 00
1¼ and 1½ in., 6-in. and up wide		35 00
2 in., 6-in. and up wide		36 00
2½, 3 and 4-in., 6-in. and up wide	45 00	48 00
Common and Dressing Mill Run		
1-in. x 4 in.		32 00
1-in. x 5-in.		32 00
1-in. x 6 in.		34 00
1-in. x 8-in.		34 00
1-in. x 10-in.		36 00
1-in. x 12-in.		38 00
1-in. x 13-in. and up		38 00
1¼, 1½ and 2-in.		40 00
No. 1 Barn		
1 inch	38 00	48 00
1¼, 1½ and 2-in.	45 00	51 00
2½ and 3-in.		55 00
4 inch		58 00
No. 2 Barn		
1 inch	35 00	42 00
1¼, 1½ and 2-in.	38 00	44 00
2½ and 3-in.		46 00
No. 3 Barn		
1 inch	32 00	36 00
No. 1, 1, 1¼, 1½, 2-in.		34 00
Box		
No. 1, 1, 1¼, 1½, 2-in.	29 00	31 00
No. 2, 1¼, 1½, 2-in.		26 00
Mill Culls		
Mill run culls, 1-in.		27 00
1, 1¼, 1½ and 2-in.		28 00
No. 2	24 00	26 00
Lath		
No. 1, 32-in. pine		2 00
No. 2, 48-in. pine		5 00
No. 1, 48-in. pine		5 50
No. 3, 48-in. pine		4 50
Hemlock Lath, 48-in.		4 50

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac.

Dimension. S. 1 S. and 1 E.	6 ft.	8 ft.	10 ft.	14 & 16 ft.
2 x 4, 6, 8	16 00	19 00	22 50	23 50
2 x 10	20 00	20 50	23 50	24 50
2 x 12	20 00	21 00	25 50	25 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH.

Mountain Stock.

Dimension.

2 x 4, 8, 12, 14, 16	23 50
2 x 4, 10, 18, 20	25 50
2 x 6, 8 to 16	23 50
2 x 8, 8 to 16	23 50
2 x 4-6 and 8 in.; 24, 26, 28, 30, 32 ft.	31 50
2 x 10 and 2 x 12; 8-16 ft.	28 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	30 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	32 50
No. 1 Common Boards.	
4 inch	23 00
6 inch	25 50
8, 10, 12 inch	27 50
Mixed widths	26 50
Flooring.	
4 or 6 inch No. 1	37 00
4 or 6 inch No. 2	32 00
4 or 6 inch No. 3	26 00
Shiplap—Finished.	
6 inch	24 00
8, 10 and 12 inch	25 00
Siding.	
6 inch No. 1	37 00
6 inch No. 2	35 00
6 inch No. 3	27 00
Lath.	
No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed)	4 50

PINE—ROUGH TIMBER.

3 x 6 in.; 8 to 16 ft.	29 10
3 x 8 in.; 8 to 16 ft.	26 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	29 00
4 x 10 to 10 x 10, 8 x 8, 6x 12 in. up to 32 ft.	31 00

BRITISH COLUMBIA COAST FIR.

Dimension S1S and E.

2 x 4 in.; 6 and 8 ft.	22 50
2 x 4 in.; 12 and 14 ft.	23 50
2 x 4 in.; 10 and 16 ft.	24 50
2 x 4 in.; 18 and 24 ft.	25 50
2 x 4 in.; 22 and 24 ft.	26 50
2 x 4 in.; 26 to 32 ft.	28 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	25 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	27 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	28 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	30 00
2 x 14 in.; 10 to 16 ft.	30 00
2 x 14 in.; 18 and 20 ft.	32 00
2 x 14 in.; 22 and 24 ft.	33 00
2 x 14 in.; 26 to 32 ft.	35 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	26 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	27 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	28 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	29 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	31 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft.	29 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft.	30 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft.	30 50

FLOORING.

Nos. 1 and 2, 1 x 3 in., E. G.	37 00
Nos 1 and 2, 1 x 4 in., E. G.	40 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in. F. G.	30 00
Nos. 1 and 2, 1 x 6 in., F G.	35 00
No. 3, 1 x 4 in.	28 00
No. 3, 1 x 6 in.	33 00

No. 3 Edge grain $3 per M. extra.

SHIPLAP.

B. C. fir, 6 in.	23 50
B. C. fir, 8, 10, 12 in.; 8 to 16 ft.	24 50
No. 2 shiplap, 6 in.	23 50
No. 2 shiplap, 8, 10 and 12 in.	24 50

FIR, COMMON BOARDS, S1S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	22 00
Common boards, 8 to 12 in.	23 00
No. 2 mixed widths	18 00
No. 2 boards, 8 to 12 in.	19 00

SHINGLES.

XXX B. C. cedar	3 05

LATH.

Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's	4 50
Cedar lath, ⅜ x 1⅜ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers, 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	38 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	38 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00
No. 1 Moulding 8/4	62 00

(Continued on page 58)

The "Grim Reaper" of Your Profits

That irresistible old gentleman, "Father Time," needs the guiding hand of an International Time Recorder, or he will become the "Solitary Reaper" of your profits.

The legitimate profit of most manufacturers' plants is made by buying raw materials and making them into some product. You have weigh scales, gallon measures and yard sticks for checking up most of your purchases, but are you getting all the time you pay for?

An International Time Recording System in your plant will enable each employee to register his own time, and if he is late a "red" entry warns him.

There are over one hundred styles of Internationals — one will meet your requirements. The prices range from ***$135.00*** up.

Getting the original pay roll entry printed
Getting it printed by the employee himself

MADE IN CANADA

The International Time Recording Company of Canada, Limited

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227 McDermott Ave.

F. E. MUTTON, General Manager
28 Anderson St.
TORONTO
Toronto Phone—Col. 622.
VANCOUVER—R. Donohoe, 305 Birks Bldg.

MONTREAL
W. A. Wood, Jr., Sales Agent
Cartier Bldg., Cor McGill and Notre Dame Sts.
Phone—Main 7025

CURRENT LUMBER PRICES — Continued

No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda.

	1s & 2s	No. 1 Com.	No. 2 Com.
MAPLE			
4/4	46 - 48	28 - 30	18 - 20
5/4 to 8/4	58 - 60	36 - 38	20 - 24
10/4 to 16/4	68 - 70	48 - 50	28 - 30
RED BIRCH			
4/4	58 - 60	38 - 40	22 - 24
5/4 to 8/4	60 - 62	40 - 42	24 - 26
SAP BIRCH			
4/4	48 - 50	32 - 34	20 - 22
5/4 and up	50 - 52	34 - 36	22 - 24
SOFT ELM			
4/4	40 - 42	28 - 30	20 - 22
5, 6 & 8/4	42 - 44	30 - 32	20 - 22
BASSWOOD			
4/4	44 - 46	34 - 36	22 - 24
Thicker	42 - 44	32 - 34	22 - 24
PLAIN OAK			
4/4	52 - 54	33 - 35	19 - 21
5/4 to 8/4	51 - 53	29 - 31	17 - 19
ASH, WHITE AND BROWN			
4/4	51 - 54	29 - 31	19 - 21
5/4 to 8/4	61 - 64	34 - 36	20 - 22
10/4 and up	74 - 87	46 - 48	22 - 24

BOSTON, MASS.

White pine uppers, 1 to 2 in.		119 00
Selects, 1 to 2 in.	106 00	109 00
Fine common, 1 in.		78 00
Fine common, 1¼ to 2 in.	85 00	87 00
No. 1 Cuts, 1 in.		60 00
No. 1 Cuts, 1¼ to 2 in.	70 00	75 00
No. 2 Cuts, 1 in.		49 00
No. 2 Cuts, 1¼ to 2 in.	60 00	66 00
Barn Boards, No. 1, 1 x 12		59 00
No. 1, 1 x 10		51 00
No. 1, 1 x 8		49 00
No. 2, 1 x 12		50 00
No. 2, 1 x 10		49 00
No. 2, 1 x 8		47 00
No. 3, 1 x 12		48 00
No. 3, 1 x 10		46 00
No. 3, 1 x 8		44 00
Canadian spruce boards		38 00
Spruce, 12 in. dimension		38 00
Spruce, 10 in. dimension		38 00
Spruce, 9 in. dimension		37 00
Spruce, 8 in. under dimen.		36 00
10 and 12 in. random lengths, 8 ft. and up		36 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7.		28 00
3 x 4 and 4 x 4 in.	29 00	31 00
2 x 8 in.		33 00
All other random lengths, 7-in. and under, 8 ft. and up	28 00	30 00
5-inch and up merchantable boards, 8 ft. and up, p. 1s		31 00
1 x 2		27 00
1 x 3		27 00
1⅝-in. spruce laths		5 10
1½-in. spruce lath		4 70

New Brunswick Cedar Shingles

Extras		4 75
Clears		4 50
Second Clears	3 25	3 50
Clear whites		2 75
Extra 1s (Clear whites in)	1 75	2 25
Extra 1s (Clear whites out)	1 65	1 90
Red Cedar Extras, 16-in. 5 butts to 2-in.		5 00
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		5 40
Red Cedar Perfections, 5 butts to 2¼		6 00
Washington 16-in. 5 butts to 2-in. extra red cedar.		5 00

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

Blanchard Lumber Co.

H. W. BLANCHARD, Treas.

WHOLESALE LUMBER

Eastern Spruce
Hemlock
Pine
Shingles and Lath

Shipment by car, canal boat or cargo.

Owing to constantly increasing sales we are anxious to establish new connections with Eastern Spruce mills, for shipment by car to Boston and New York markets, or by canal boat from Quebec to New York.

We also desire more connections with manufacturers of British Columbia red cedar shingles and cedar siding.

We will buy outright or sell on a 5 per cent. commission.

Douglas Fir
Red Cedar Shingles
Hard Pine
Maple Floors

We manufacture Spruce at our own Mills at Portage, Maine, U. S. A., and therefore we know what big prices mean to the manufacturer

11 Broadway, NEW YORK, N.Y., U. S. A.

126 State Street, BOSTON, MASS.

Western Office: Lumberman's Bank Bldg., Portland, Ore.

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SMALL TOOLS

Taps — Dies — Reamers — Cutters — Drills

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As good as money can buy—Guaranteed absolutely!

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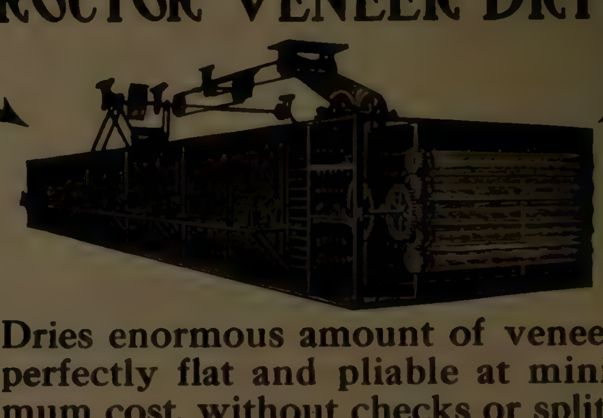

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There is a handsome return on any investment in the chemical industry—particularly in the manufacture of those chemicals which we heretofore imported from Germany.

The industry is particularly attractive to lumbermen as many valuable chemicals are obtainable from wood waste by our complete wood distillation and chemical plant.

Guaranteed Results

BLAIR, CAMPBELL & McLEAN
LIMITED
GLASGOW, SCOTLAND

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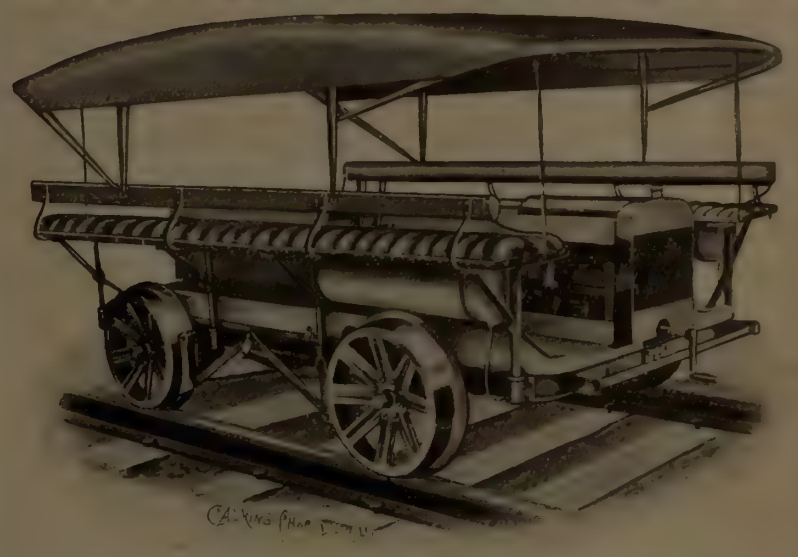
NATIONAL Railway Motor CARS



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We recommend this car highly for lumber companies operating a short line railway, as it is an ideal car for light passenger service, or tractor for hauling supplies, moving crews, etc. Frame is of 3 x 1⅜ x 5/16 channel steel; axles 1 11/16 inches with Hyatt roller bearings; 20 inch pressed steel wheels of extra strength. Four cylinder, four cycle, water cooled, 10-12 h. p. engine, equipped with Atwater-Kent ignition system, float feed carburetor with throttle and spark control, and kerosene attachment. We also equip the car with friction drive as it gives a variation of speed and power. Reverses by shifting friction wheel over center on the disc, and runs in either direction equally as well. Seats are nicely upholstered, with lazy backs; folding top with jiffy side and end curtains. The car is a complete job that will cut operating expenses in quarter.

Price Complete $800.00 F.O.B. Factory.—If interested write us for complete descriptive matter or place order direct from this ad. 4L

Northwestern Motor Co., 1500 Spring Street **Eau Claire, Wis.**

ONTARIO

Canada's Banner Province

Ontario's timber production last year valued at $26,774,937 or 40% of Canada's total output.

Pine production,	905,442,000 ft. B.M.
Pulpwood,	246,282 cords.
Railway Ties,	5,704,459.

Ontario's woodworking industries, using 34 different kinds of wood, provide a ready market for the lumberman. Eighty-two per cent. of lumber used in Ontario's industries purchased within the Province.

Ontario's vast resources offer unsurpassed opportunities to the lumberman.
For maps and full information regarding Ontario, apply to

HON. G. HOWARD FERGUSON,
Minister of Lands, Forests and Mines.

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Jenckes Machine Company
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McKinnon Chain Company
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Cameron & Company
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Fraser Limited
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Knox Brothers.
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Bartram & Ball.
Blanchard Lumber Company
Boake Manufacturing Company.
Bourgouin, H.
Graves, Bigwood & Company
Haeberle Lumber Company
Hart & McDonagh
Laferte, J. A.
Long Lumber Company
McGibbon Lumber Company
Mason, Gordon & Company
Spencer, C. A.
Terry & Gordon
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Arkansas Lumber Company
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Eagle Lumber Company
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Gates Lumber Company
Mason, Gordon & Company
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(Continued on page 62)

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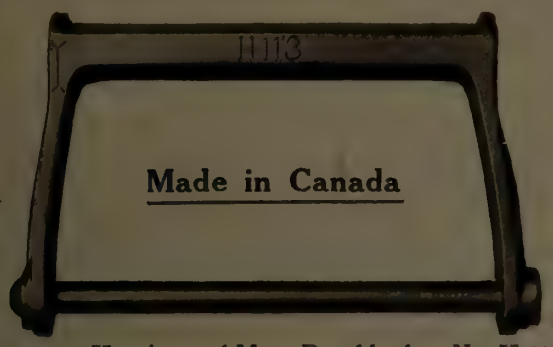

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Waterous Engine Works Company
Yates Machine Co., P. B.

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Fraser Limited
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Harris Tie & Timber Company
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Long Lumber Company
Mason, Gordon & Company
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McLennan Lumber Company
Shier Lumber Company, J. D.
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(Continued on page 64)

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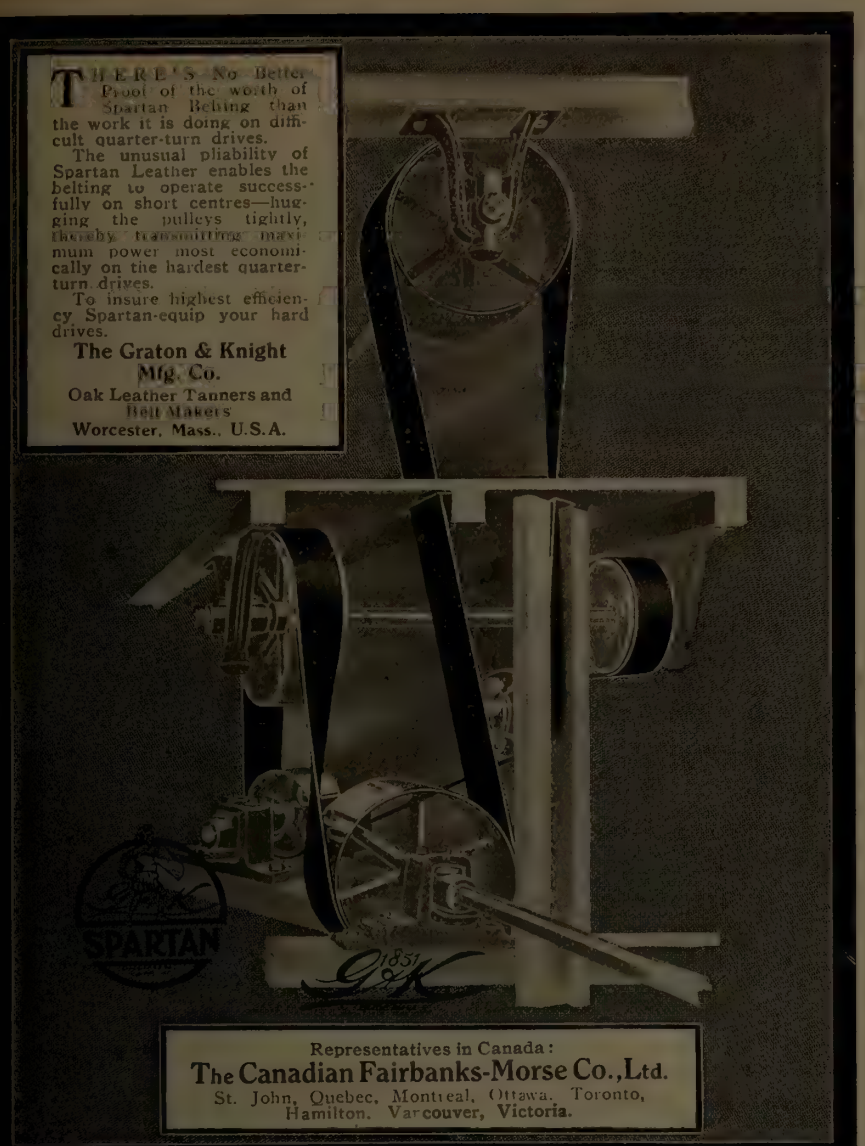

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Differs in Quality and Variety

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For the reason that they cut cool and clean and fast, even when forced to the limit—and they hold their shape—show long life.

There is nothing superior to Aloxite for steel grinding—it is hard, sharp and of just the right degree of toughness and Aloxite Saw Gumming wheels are

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Our illustrated catalogue contains full details.
A copy will be sent you on request.

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are built with 40", 48", 56", 60" and 72" opening. They carry as many as four movable and two stationary saws without difficulty.

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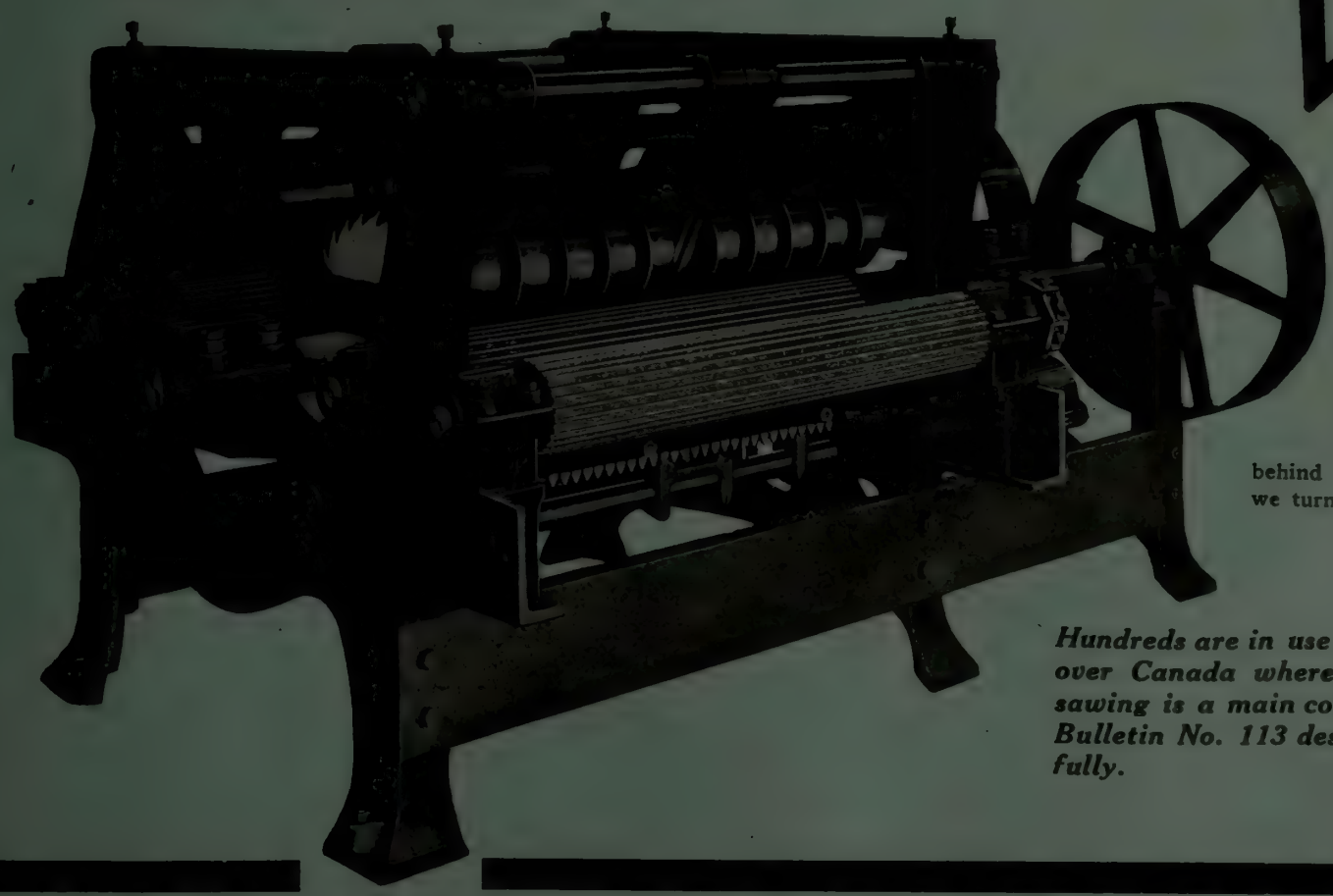

Waterous New Champion Edgers are fast and accurate cutting, easily operated, and perfectly safe. We stand behind every machine we turn out.

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$5,000,000.00
worth of mixed metal sold annually.

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. Price **30c per lb., Fort William and East; West of Fort William 35c per lb.,** delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our TROJAN BABBITT will stand where all other metals will fail. Price, Fort William and East, **40c per lb.**; West of Fort William, **45c**, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

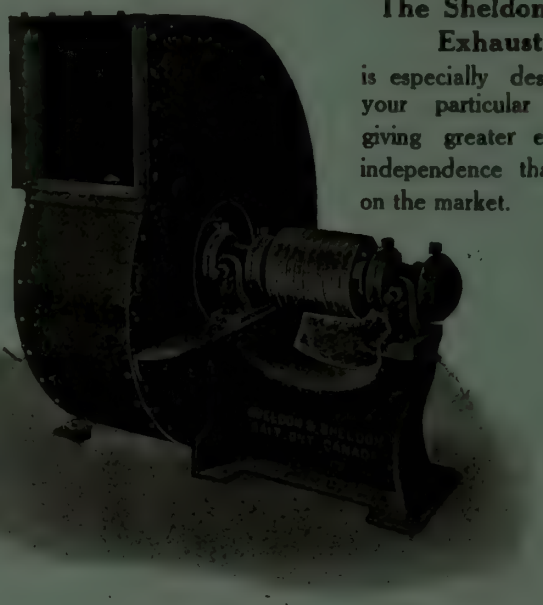
HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Planing Mill Improvements

Every Manufacturer in the Lumber Industry realizes that to be "up-to-date" their Factory should be installed with **Shaving Exhaust Fans.**



The Sheldon Shaving Exhaust Fan

is especially designed to suit your particular requirements giving greater efficiency and independence than any other on the market.

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Sheldons Limited - Galt, Ontario

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AGENTS:

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The J. C. McLaren Belting Co.
Limited

General Mill Supplies MONTREAL

Pink's Lumbering Tools

The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
We manufacture all kinds of lumber tools. Light and Durable.

Long Distance Phone, No. 87

Send for Catalogue and Price List.

Sold throughout the Dominion by all Wholesale and Retail Hardware Merchants.

The Thomas Pink Company, Limited

Manufacturers of Lumber Tools

PEMBROKE - - - - - ONTARIO

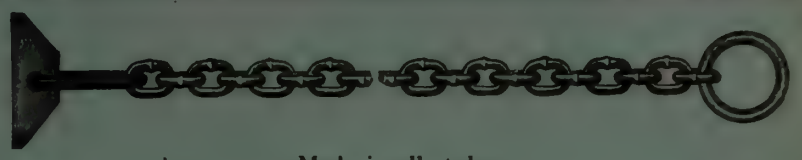
It's a Pink anyway you take it, and it's the best Peavey made

Canada Lumberman & Wood Worker

New **RAILS** Relaying
12 to 80 pounds per yard.

LOGGING CARS

Jno. J. Gartshore
58 Front St. West, Toronto



Made in all styles

Electric-Welded Boom Chain

We also specialize
Log Chains and "Dreadnaught" Loading Chain
Made in Canada Write to Fully Guaranteed
McKinnon Chain Co., St. Catharines, Ont.

Shimer Circular Bit Jointing Heads

A circular shear cut head that is unsurpassed as a Jointing Head for stock from 1″ to 3″; always ready for the job without a set up, saving you money, and assuring a perfect square joint. Made in four, six or eight bits with or without Self Centreing Colet.

Write for Prices

SHIMER CUTTER HEAD CO. OF CANADA, LTD., GALT, ONTARIO
Successors to Samuel J. Shimer & Sons

ASBESTOS

We manufacture practically every article that can be made of Asbestos—including

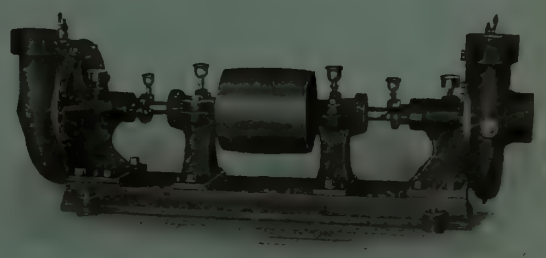
Asbestos { Packings, Boiler Gaskets, Pipe and Boiler Coverings

Atlas Asbestos Co., Limited, Montreal
(Formerly Turner Bros. Canada Limited)

Does your work call for a

PUMP

on which you can rely?



Then send your inquiry to

The Smart-Turner Machine Co., Ltd., HAMILTON CANADA

River Ouelle Pulp & Lumber Co.

Manufacturers of

SPRUCE

Lumber Lath Pulpwood

Head Office and Mills at:
St. Pacome, Que., Canada
On I. C. Ry. 75 Miles East of Quebec City
Also Mills at:
Crown Lake, Powerville Riv. Manie
On Nat. Transcontinental Ry.

Alphabetical Index to Advertisers, Page 54 Classified Directory to Advertisements, Page 60

The Only Loose Pulley

L. A. DeLaplante Limited

LUMBER

DOORS, SASH AND INTERIOR TRIM

MAIN ST.

East Toronto June 17/10

Chapman Double
Ball Bearing C/o

Dear Sirs

In regard to double ball bearings supplied by you, we find those on line shaft giving entire satisfaction and find them quite a saving on power, as for the ball bearing loose pulleys, they are decidedly the finest, and only satisfactory loose pulley we have ever had, no noise no heating and consequently no loss of time, which so frequently occurs with the ordinary loose pulley, we have run the loose pulley on our big matcher for nearly two years and consider it a severe test and it runs as nice to day as the first day we used it can recommend your bearings and pulleys to any one in the manufacturing business especially planing mills with which we have proved

Yours very truly
L. A. DeLaplante Limited
per W. Costain Supt

Chapman Double Ball Bearings

have been installed in over 3000 factories of all classes during the past fifteen years, and the above letter is one of many of a similar import, bearing testimony to the efficiency, long life, and cleanliness of the bearing. Some of these have been compiled in a booklet, "Results", which we will be pleased to send on request.

Chapman Double Ball Bearing Co., Ltd.

337-351 Sorauren Avenue, TORONTO

Transmission Ball Bearing Co., Inc., 1050 Military Road, Buffalo, N. Y.

SPRUCE

1916 SAWING

Merchantable

2 x 3 x 10/16	- P. 1 E. 2,500'		2 x 6 x 10/16	-	10,459'
2 x 4 x 10/16	- 43,368'		2 x 7 x 10/16	-	77,272'
2 x 5	- 22,704'				

1917 SAWING

Merchantable

1 x 3 x 10/16	- 128,360'	2 x 4 x 8/16	- 248,053'	3 x 6 x 10/16	- 263,533'
1 x 4 "	- 286,212'	2 x 5 "	- 134,920'	3 x 7 "	- 188,706'
1 x 5 "	- 80,514'	2 x 6 "	- 61,630'	3 x 8 "	- 137,740'
1 x 6 "	- 30,004'	2 x 7 "	- 39,586'	3 x 9 "	- 124,964'
1 x 7 and up	- 33,613'	2 x 8 "	- 16,360'	3 x 10 "	- 58,640'
		2 x 9 and up	- 9,000'	3 x 11 "	- 68,715'

Mill Culls

1 x 3 and up x 6/16 - 47,200' 2 x 4 and up x 6/16 - 62,500' 3 x 6 and up x 6/16 - 118,819'

Merchantable Spruce Lath 1½ x 4'—1,500,000 pieces

Bartram & Ball Limited

WHOLESALE LUMBER

Drummond Bldg. - Montreal, Que.

B.C. Fir Lumber and Timbers

Rough or Dressed

On account of the uncertainty of car and mill supply, we are offering only material that is in transit. We then know that we can deliver these cars when promised.

Wire us your enquiries.

Cars Now in Transit:

Flooring
Ceiling
Rough Clear Fir, Kiln Dried
Ship-Decking
Timbers
Shingles
Tank Stock
Ship Timbers and Planking

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SPECIALISTS IN BRITISH COLUMBIA FOREST PRODUCTS

Sole representatives of The Victoria Lumber & Manufacturing Company, Ltd., in Eastern Ontario, Quebec and Maritime Provinces.

CHEMAINUS

Chemainus Finish

B. C. Douglas Fir
Flooring
Ceiling
Siding

Prompt service either straight or mixed cars.

Thirty years ago we selected the choicest forest areas of British Columbia for our logging operations.

Today we own over 3,000,000,000 feet of B. C. Douglas Fir, Cedar, Hemlock and Spruce timber.

Our annual cut does not exceed 75 per cent. of our annual growth so you see we count on being in business for some time yet; therefore, we shall treat your trade as something of permanent value to us.

We state the facts to prove to you that we mean business. We give prompt service and high grade lumber on every order.

Get our prices on your next order.

Victoria Lumber & Mfg. Co., Limited

Head Office and Mill
CHEMAINUS, B. C.

Eastern Sales Office
Traders Bank Building, **TORONTO, ONT.**
R. G. CHESBRO, Representative

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

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Fassett, Que.

In Good Shipping Condition
Want to Move

AT ARNPRIOR

50,000 1 x 4—12 to 16 ft. Mill Run White Pine Strips
30,000 1 x 5—12 to 16 ft. " " "
30,000 1 x 6—12 to 16 ft. " " "
50,000 1 x 8 and up 12 to 16 No. 1 Mill Cull White Pine
100,000 1 x 12—12 to 16 No. 2 " "

AT CACHE BAY

50,000 1 x 10 and 12—10 to 16 No. 1 Mill Cull White Pine

AT MIDLAND

1 Car 1 x 6—10 to 16 Mill Run White Pine
1 Car 1 x 12— " " "

The Long Lumber Company
Hamilton
Canada

Rubber Goods
FOR LUMBERMEN

Belting Our long experience in the making of Rubber Belts enables us to specialize on this line. "P.M.S.," "Special Drive" and "Lion" are our leading brands for power transmission.

Packings "Redstone" High Pressure Sheet Packing has proved by test that it will outlast any other similar packing on the market. We make Spiral and Ring Packings, etc., that are equally reliable.

Hose for Steam, Water, etc., in various grades, made especially to give satisfactory and economical service under different conditions.

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Gutta Percha & Rubber, Limited

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Limited

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RED and WHITE PINE

PLANING MILL **DRY KILN**

A Cheaper, Quicker and Better way for Handling Lumber, Dimension Stuff, etc.

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Mills at Victoria Harbor, Ont.

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Wholesale Lumber Dealers
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Mills at

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White Pine
Red Pine
Spruce
Lumber and Lath

Austin & Nicholson

CHAPLEAU, ONTARIO

Lumbermen and General Contractors

Railway Ties and Pulpwood

PILING

Rough and Dressed Lumber and Lath

MILLS AT NICHOLSON, ONTARIO

Long Leaf Yellow Pine, Louisiana Red Cypress

Annual Capacity 350,000,000 Feet Yellow Pine
50,000,000 Feet Red Cypress

Nature's best in forest products

LET US QUOTE YOU PRICES

Up-to-date mills and unsurpassed **SERVICE.**

We are ***prepared*** to fill orders—try us.

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Manufacturers

General Offices: EAST ST. LOUIS, ILLS.

I HAVE IT

All Grades in White Pine Lath A Specialty

Milling in Connection

E. J. MOORES, Jr.

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LET'S GET TOGETHER

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OTTAWA

175/200 M. 5/4x4" up 6/11'

Mill Run
Bone Dry
White Pine

The
Harris Tie & Timber Co.
Ottawa - Canada
Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

Let us quote on your requirements for
Spruce and Pine Lumber

We manufacture and export all kinds of it.

WE ALSO MANUFACTURE
LATHS and TIES
PULPWOOD

Shipments by rail and water
Prompt--reliable--carefully handled

We Specialize in
New Brunswick White Cedar Shingles
LET US QUOTE YOU

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Campbellton, N.B.

Veneer Doors

WE have a large stock of hardwood veneer doors in plain and quartered Oak and Birch.

Also a selection of Fir doors from 18 inches to 5 ft. wide.

Do you need any Heavy Timbers?
Get our prices.

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TORONTO, ONT.

Crescent Lumber Company
Cincinnati, Ohio

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— *SPECIALTIES* —

TIMBER - DIMENSION - FINISH

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33 RICHMOND ST. WEST, TORONTO
Lumber and Other Forest Products
Offer Dry Stock

80,000 ft. 1 x 4	—10/16	Red and Jack Pine, M.R.				
70,000 " 1 x 5	"	"	"	"	"	
63,000 " 1 x 6	"	"	"	"	"	
42,000 " 1 x 7	"	"	"	"	"	
48,000 " 1 x 8	"	"	"	"	"	
15,000 " 1 x 9 & 10	"	"	"	"	"	
6,000 " 1 x 12	"	"	"	"	"	
25,000 " 2 x 10	"	"	"	"	"	
31,000 " 2 x 8	"	"	"	"	"	
100,000 " 2 x 6	"	"	"	"	"	

CAN BE DRESSED AT MILL

RIGHT GRADES
QUICK SHIPMENTS

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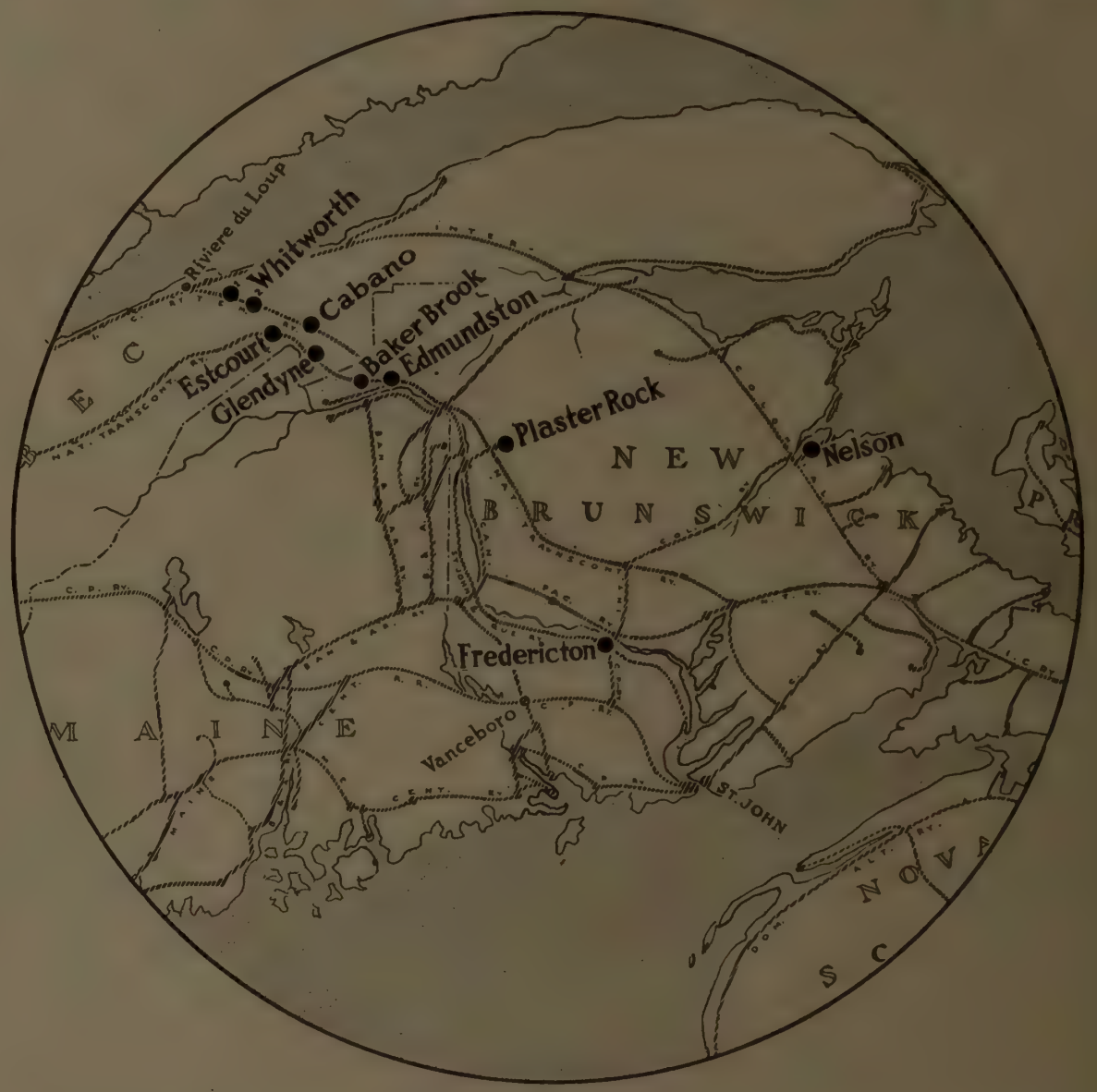
E. M. Simonson

MANITOBA
Winnipeg—H. W. Dickey

Ten Band Mills to Serve You



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Fredericton, N.B.	Railway connection		C. P. R.
Plaster Rock, N.B.	"	"	C. P. R.
Nelson, N.B.	"	"	I. C. R.
Edmundston, N.B.	"	"	C. P. R. or Temiscouata Ry.
Baker Brook, N.B.	"	"	Temiscouata Ry. and N.T.R.
Glendyne, Que.	"	"	N. T. R.
Escourt, Que.	"	"	N. T. R.
Cabano, Que.	"	"	Temiscouata Ry.
Whitworth, Que. (No. 1, No. 2)	"	"	Temiscouata Ry.

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ROUGH AND DRESSED SPRUCE, WHITE CEDAR SHINGLES, SPRUCE LATH, PIANO SOUNDING BOARD STOCK.

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LUMBER

Dry Spruce and Pine, Rough or Dressed

LATH

Spruce—Fifty Pieces per Bundle

FOR RAIL SHIPMENT

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"BEAVER BRAND" Cedar—Full Count

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Grant & Campbell

Manufacturers of
SPRUCE, HEMLOCK TIMBERS AND PILING AND LATH

Prices promptly given on all enquiries.

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100 M. ft. 2x6x10/16' M.R. White Pine
100 M. ft. 2x8x10/16' M.R. White Pine
50 M. ft. 3x8x10/16' M.R. White Pine
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50 M. ft. 1x10 No. 1 Mill Cull W. Pine
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Also Hemlock and Lath.

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We are Buyers of ALL GRADES
WHITE PINE, SPRUCE and HEMLOCK LATH
Will contract for entire output and pay spot cash
Send full particulars as to grade, quantity and prices

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DETROIT - - - MICH
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Sawed Hemlock
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White Pine Lath
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Pine and Hardwood

Lumber

Lath and Shingles

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When in the market for

White or Red Pine

or for

Ontario Hardwoods

Let Us Quote You

We have a full line of White Pine and Spruce.

We are ready to contract for Output of mills in any Ontario Soft or Hardwoods.

Highest cash prices paid, and would advance money for operations.

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We are at all times in the market for dry WHITE PINE, DIMENSION SPRUCE, SPRUCE BOARDS, HEMLOCK BOARDS, LATH and CLAPBOARDS.

Advise us of your Market Prices and Stocks

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HAEBERLE LUMBER CO.
LUMBER AND TIMBER
White Pine, Norway, Yellow Pine, Hemlock
Oak Mouldings, Doors, Sashes and Blinds, Cedar Poles and Ties,
Yellow Pine Timber a Specialty,
Interior Trim Mill Work
NIAGARA FALLS, N.Y.

Tea that is all genuine leaf and produces the greatest quantity of flavoury satisfying infusion

"SALADA"

Send for samples and prices.
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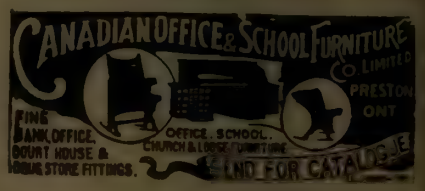
DR. BELL'S
Veterinary Wonder Remedies

10,000 one dollar ($1.00) bottles Free to horsemen who give the Wonder a fair trial. Guaranteed for Colic, Inflammation of the Lungs, Bowels, Kidneys, Fevers, Distemper, etc. Send 25c for Mailing Package, etc. Agents wanted. Write your address plainly. DR. BELL, V.S., Kingston, Ont.



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Wire tied box shooks can be handled more easily, more economically and with the safe assurance that wire will not break. Write for Quotations.

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347 Adelaide St. W. TORONTO
Send for advertising rates

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Back of the mill is the timber. A mistaken estimate may mean disaster. Employ experienced men who know. We have the largest timber cruising business east of Chicago. Write for density plan.

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OLD TOWN, - MAINE

PRESSES

Hydraulic and Screw
for
VENEER
VENEER DRYERS
PULP
Special machinery made to order

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Appraisal of timber lands, timber maps, logging efficiency reports, planting. Maximum of accuracy in minimum time and at minimum expense.

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Staves Hoops
Headings
James WEBSTER & Bro.
Limited
Bootle, Liverpool, England
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"Well Bought is Half Sold"

WE OFFER the following SPRUCE

50 M 1 x 4 Merch.
40 M 1 x 6 Merch.
60 M 5/8 x 4 and up Merch.
20 M 5/4 x 4 Merch.
40 M 5/4 x 5 Merch.
40 M 5/4 x 6 Merch.
20 M 5/4 x 7 Merch.
8 M 5/4 x 8 Merch.
100 M 2 in. Scant x 5 Merch.
100 M 2 in. Scant x 7 Merch.
150 M 2 in. Scant x 8 Merch.
100 M 2 in. Scant x 9 Merch.
75 M 2 in Scant x 10 Merch.
20 M 5/8 x 4 and up Cull.
50 M 1 x 4 and up Cull.
10 M 5/4 x 4 and up Cull.
30 M 2 in. Scant x 4 and up Cull.

The above is choice, well sawn stock, largely 12 and 13'. Can be shipped promptly.

Graves, Bigwood & Co.

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Pine
Hemlock
Hardwood } **LUMBER**

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Montreal Office:—327 Coristine Bldg.
Mills: Byng Inlet, Ont.

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MONTHLY LIST
of
NEW and USED
WOOD TOOLS
for Immediate Delivery

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54" McDonough, horizontal.
28" Ballantine, bracket.
26" Crescent pedestal.

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No. 1 Crescent.
No. 3 Crescent universal cut-off gauge.
No. 5 Crescent, sliding top (2).
Ballantine variable power feed.
No. 257 Berlin power feed rip.
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12' Defiance automatic cut-off.
MacGregor Gourlay power feed cut-off
Greenlee automatic cross-cut.
Champion combination wood top.
Canadian steel frame pole saw.
6½' Williams wood frame swing.
5½' Crescent swing (2).

Planers
30" Whitney pattern single surfacer (2).
26" double surfacer.
24" Cowan revolving bed.
24" Champion planer and matcher.
16" Canada Mach. Corp. pony planer.
15" Woods planer and matcher.

Sanders
24" Fay double drum.
18" Crescent disk and drum.
12" Canada Mach. Corp.

Moulders
13" Clark-Demill four side.
12" Cowan four side.
12" Woods, four-side.
10" Houston four side.
8" Dundas, four-side.
6" Cowan four side.
6" Dundas sash sticker.

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M190 Cowan hollow chisel.
Galt upright, compound table.
No. 1 Smart foot power.
No. 2 Smart foot power.
No. 5 New Britain chain.

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Humphrey No. 8 giant slab re-saw.
Humphrey gang slitter.
Humphrey cylinder cutting-off machine
Humphrey automatic lathes (6).
Humphrey double slotters (4).

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Elliot universal woodworker.
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M80 Cowan dowel machine.
No. 1 Ballantine dowel machine.
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Cowan geared post boring machine.
New Britain drawer lock machine
M137 Cowan sash clamp.
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Dundas double head tenon machine
3" Pringle & Brodie variety lathe.
16" Ideal wood lathes
No. 4A Fox wood trimmer.
20" American wood scraper.
4-head rounding machine.
MacGregor Gourlay 2 spindle shaper.
M63 Cowan spindle carver.
Iron frame 3-block sawmill.
Dougherty horizontal shingle machine.
26" Dominion lath trimmer.
Waterous lath machine.
No. 2 Dominion lath machine and bolter.
48" 3-saw edger.
No. 1 Automatic saw filer.
No. 104 Covel band-saw roller.
No. 66 Hamilton band-saw sharpener.
No. 6 Covel band-saw swedge.
No. 21 Covel filing lamp.
Defiance automatic handle shapers.
Defiance rounding, boring and jointing machine.

Prices, Descriptions and full particulars on request.

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FIR TIMBER and Finish, CEDAR SHINGLES and Lumber

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Manufacturers of

Hardwood Lumber

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$2\frac{1}{2}$ to 6 in. **WHITE OAK**

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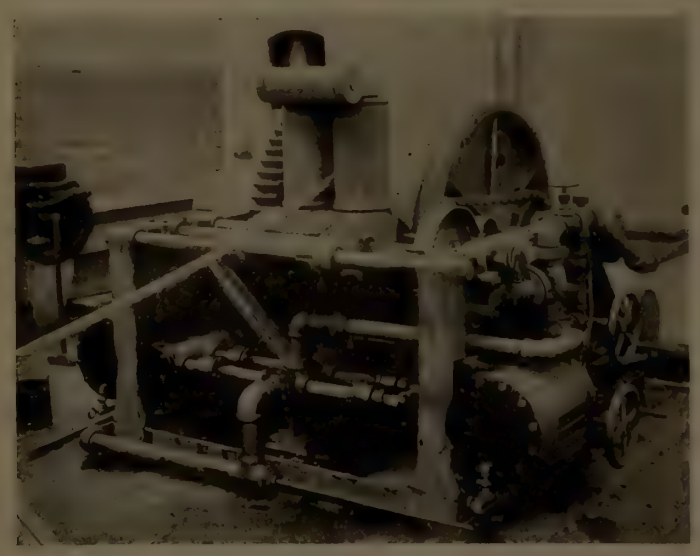

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Per Capt. E. F. Burke,
Pres. and Gen. Manager.

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Owen Sound - Ontario - Canada

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are the surest, the most economical and the best medicines with which to equip your stables. They have been on the market for twenty-five years and still retain their superiority over all others.

The quality never varies, it is our first consideration.
Prices taking effect July 1st are as follows:

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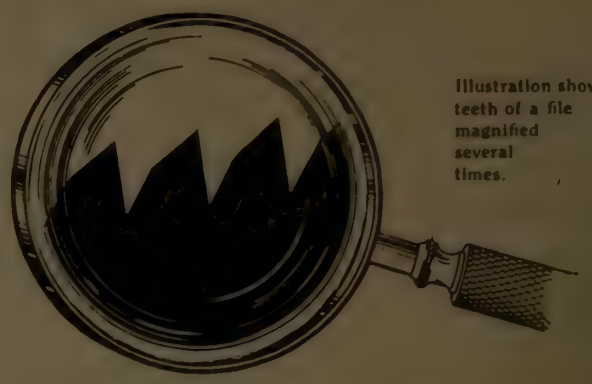

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Genuine Oak

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MONTREAL TORONTO WINNIPEG

Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

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HUGH C. MacLEAN, Winnipeg, President.
THOS. S. YOUNG, Toronto, General Manager.

OFFICES AND BRANCHES:

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LONDON, ENG. - - - - - - - - - - 16 Regent Street, S.W.

TERMS OF SUBSCRIPTION

Canada, United States and Great Britain, $2.00 per year, in advance; other foreign countries embraced in the General Postal Union, $3.00.
Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster-General for Canada, for transmission as second-class matter.

Entered as second-class matter July 18th, 1914, at the Postoffice at Buffalo, N.Y., under the Act of Congress of March 3, 1879.

Vol. 37 **Toronto, October 1, 1917** **No. 19**

A "Wooden Shipbuilding" Number of the Canada Lumberman

The revival of the wooden shipbuilding industry in Canada is one of the most interesting developments that have come to pass as a result of the war. Many years ago Canadian sailing vessels constructed of wood were known on all the seven seas, but the advent of the steam vessel constructed of steel practically forced the wooden vessels out of existence, and the famous shipbuilding yards of the Atlantic Coast fell into disuse. During the past two years a reversal of this situation has taken place, and wooden sailing vessels, as well as steamers, are being built in many parts of Canada, in order to furnish tonnage to take the place of that which has been destroyed by enemy submarines.

The lumber industry of Canada is doubly interested in the wooden shipbuilding industry, as it furnishes a market for the use of large quantities of timber and lumber, and will be a factor in relieving the scarcity of tonnage for the shipment of lumber and timber from Canada to foreign markets. A large number of wooden steamers for ocean service are being constructed in Canada for the British Government, and private shipyards throughout the Maritime Provinces, Ontario and British Columbia are once more active, working upon orders that are keeping them in operation to their utmost capacity.

A "Wooden Shipbuilding" Number of the Canada Lumberman, which will be published in November, will, for these reasons, be an exceptionally interesting production. It will reflect the activity of the industry in all parts of the country, and be an impressive illustration of its greatness and importance to Great Britain and the Allies in the prosecution of the war. Arrangements are being made to include in this number not only a survey of the shipbuilding activities of the present day, but a review of the early days of the industry, with all its peculiar mingling of romance and trade. Our forefathers understood well the significance of the shipbuilding industry to the welfare of the people of Canada, but in these busy days of steam and the development of the vast natural resources of Canada the events of the past have been largely effaced from our memories, and their records are only found in the annals of the earlier days. The articles which are being prepared for the "Wooden Shipbuilding" number of the Canada Lumberman will recall these activities of former days and set them forth in striking contract with those of to-day.

From this outline it will be realized that the "Wooden Shipbuilding" number of the Canada Lumberman will be one of the most unique and interesting issues of a trade journal that has ever been published in Canada. On account of this it is certain to be prized by its readers and carefully preserved as a record of a distinctive period in our national life, the significance of which cannot be overestimated, and as a review of the life of one of Canada's most interesting and important industries. Moreover, the likelihood that the wooden shipbuilding industry of Canada will outlast the war and be one of the good industries of the country for many years to come, will give to this number an importance that few special numbers can enjoy.

The Wholesaler's Troubles

A reputation for reasonableness and for living up to contracts is a fine asset for a lumberman. It is strange that this fact is not appreciated as fully as it might be by some men who have been in business for a long time. Trying to get out of a contract to buy or to deliver, when the market has gone wrong, is a frequent occurrence. The man who acts in this way does himself more injury than he imagines. He is simply advising the other party to the transaction that he will stick out for the last dollar, and that it is unwise to offer him any concessions or favors, or to give him the benefit of any special market information. In short, a man of this type must pay, in the long run, a higher price for his stock and receive less for it than other men. His way of doing things is to insist upon immediate shipment when prices are going up and to try to crawl out of a contract to buy if prices subsequently fall. If he could only put himself in the other man's position he would see that he is making a bad reputation for himself, which will cost him a great deal.

Price-cutting is another evil that is starting to prevail in the trade to-day. There is much uncertainty in connection with market conditions, logging operations, next year's manufacturing outlook, etc., and it is exceptionally difficult to see far ahead in a business way. Some firms are counting upon a scarcity of stocks and strong demand next year, while others are afraid that the demand will fade away and that stocks which have been taken out or purchased at high cost will be unsaleable except at a loss. While this latter view is not very generally held, it is encountered now and then, and is just sufficiently in evidence to-day to afford a handle for unscrupulous salesmen. During the past week we have heard occasional reports of price-cutting in certain lines. Price-cutting to-day can only be the result of fears produced by mistaken views of market conditions or by some personal desire to depress the market, for an individual and selfish reason.

There are some salesmen now on the road who are endeavoring to create a feeling of unrest, and the harm they do is great. Here is an example: A salesman calling upon Ontario retailers about two weeks ago thought it advisable, for some reason or other, to say that hemlock prices would not hold. Calling upon a certain retailer who needed hemlock, he said: "I have some hemlock to offer at $25 for all lengths, and if you want any I would suggest that you only take a little. Do not stock up, as hemlock will be selling at $18 to $19 before the new year." A few days later another salesman called upon this retailer and, although the latter still needed some hemlock and other stock as well, he said that he was not in the market for anything at the time. After some conversation, the retailer reported what the other salesman had told him, giving it as his reason for staying out of the market. The second salesman found the trail of this man elsewhere during his travels that week. This salesman has put into the minds of several retailers the idea that they will soon be able to get hemlock cheaply, whereas conditions as they are reported by competent wholesalers and manufacturers seem to point towards a steady market on account of the small quantity of stock available, reduced output during the coming winter, and greatly increased cost of production.

These things bring us back to the idea we had in mind at first, namely, that it might be well for the wholesale trade if it had some

definite means of bringing pressure to bear upon parties of this kind, or even appealing to their better or sounder judgment. Price-cutting and contract cancellation are two things chosen at random out of many which play havoc with the trade. Perhaps the most prolific source of trouble is disagreement in regard to grades. When a purchaser receives a shipment of lumber and is disappointed regarding its grade, there is sure to be trouble unless he and the firm he bought from are old friends and know how to handle one another. Otherwise it is a case of one man's word against another's. There ought to be a recognized medium in the form of an association employing inspectors for the purpose of adjusting such differences as amicably as possible. There is ample room in the wholesale lumber trade in Ontario for the creation of such an association. Even the wholesale trade in Toronto alone is of sufficient size to make it advisable to deal with its troubles in this manner. The price-cutter and the man who cancels contracts unfairly might not come in for direct handling under such an association, but the effect of the education they would get would reduce greatly their objectionable ways of conducting business. There are many other matters of importance which can be dealt with successfully in such a manner, among them credits, transportation, legislation, grading, etc., none of which can be successfully dealt with by an individual. The suggestion that an association should be formed has reached the Canada Lumberman frequently of late. Undoubtedly it would be a good plan if the members of the trade would work it out vigorously. It is one of those plans, however, which require enthusiastic support, and is sure to fail without it. We see every reason why the Ontario, or even the Toronto wholesale trade, should adopt it, and we would be glad to assist it as much as possible.

Wood Construction Unfairly Criticized

It is not often that one finds in "Conservation," the bulletin of the Commission of Conservation of Canada, a statement to which objection may be taken, but, in the September number, an article is featured on the front page which, unintentionally it seems, is an injustice to the lumber interests. The article deals with the fire loss in Canadian buildings, and the injustice is contained in the heading, which is as follows: "Seventy Per Cent. of Buildings Are Frame—This Makes Reduction of Fire Waste a Difficult Problem." From this heading one would naturally expect to find the article dealing with frame construction and branding it as the guilty source of most of the heavy fire loss, but the article, fortunately, is not quite so condemnatory of wood construction. Other building materials are included in the guilty list, and the blame is placed upon faulty construction rather than upon materials. It is unfortunate, however, that a slip of this nature should have occurred, as the promoters of substitute building materials are ever on the watch for evidence in their favor, and this one-sided criticism of wood construction will undoubtedly be used by them in their publicity campaign. In fairness to the lumber industry, "Conservation" should now publish an article pointing out the many advantages of wood as a building material when properly used, and showing by fire statistics that proper wood construction is as safe as any other.

"Proper construction," in fact, is what the article in question urges, and it is unfortunate that this was not featured in the heading, instead of "frame construction." "Conservation's" article is as follows:

"Of approximately 2,000,000 buildings in Canada less than one-tenth of 1 per cent. have been built with proper consideration of safety from fire. In the cities and towns from which statistics are available almost 70 per cent. of the construction is frame. The vast majority of brick buildings are structurally defective and inadequately protected, and only one in every 1,200 is even nominally fireproof.

"With such conditions prevailing the enforcement of measures regulating future construction cannot immediately effect any substantial reduction in the volume of fire waste. There are sufficient combustible buildings in Canada to supply the present rate of loss indefinitely.

"Upon the average, fire occurs every year in one out of every eighty buildings in cities and towns. Fire prevention is concerned, therefore, not only with the erection of new buildings, but with what is of equal or even greater importance—correction of the worst faults in existing buildings so that they may be less liable to destruction."

The great thing is to see that, no matter what building materials are used, modern fire prevention methods of construction are used as completely as possible.

The Munitions Industry Situation

The statement recently made in the House of Commons by Sir Thomas White, Minister of Finance, regarding the partial discontinuance of the manufacture of munitions in Canada, definite as it seemed to be, was apparently not fully understood by the general public. The statement was that the Imperial Munitions Board had decided to discontinue the production of certain kinds of munitions in Canada, that other kinds would be produced in lessened quantities, and that the production of some lines was to be continued as at present. This could scarcely be taken, on its face, as an announcement that the munitions industry in Canada was to come to an end, but, considered in conjunction with the importance of the industry to the industrial welfare of the country at the present time, the announcement acquired an additional importance, and was accepted as a matter of the greatest gravity, involving the first stage in the breaking up of the munitions industry in this country. So general was this interpretation that instead of discussing the meaning of this announcement, the public became more interested in the effect of the discontinuance of the industry, upon the employment situation, and many a dire prophesy was heard that much distress was certain to develop during the coming winter.

If we are to form our conclusions, however, from statements which have been made in the House of Commons during a subsequent debate upon this subject the outlook is not by any means so discouraging. Sir George Foster, Minister of Trade and Commerce, and Sir Thomas White, Minister of Finance, in the course of the debate, amplified to some extent the details previously given regarding the announcement by the Imperial Munitions Board. The situation, in the light of what they said, is less ominous than it appeared. Sir Thomas White pointed out that Canada has been paying $25,000,000 per month to the Imperial Treasury for the purpose of paying for munitions in Canada, and it has been arranged to continue these payments during the balance of the present year, and he added: "It is our intention to continue such payments as long as the war lasts." Later in the debate he said: "So far as the munitions industry is concerned, the Dominion Government is furnishing more money now per month than it has furnished since the war began, and it is our expectation that we shall be able to continue the payments until the end of the war." Subsequently Sir George Foster added to the information already given a statement that Great Britain was not purchasing in the United States munitions which could be purchased in Canada. "There are other munitions of war," he said, "which Canada cannot supply, which Great Britain cannot supply to the extent needed, and which he does get from other countries, notably from the United States."

Putting together these announcements and explanations, it seems justifiable, in the absence of any more definite statement, to conclude that, although the production of certain kinds of munitions in Canada has been discontinued, other kinds are being produced in large quantities, and if the logical conclusion is taken from Sir Thomas White's reference to the continuance of the supply of finances from Canada, the total output will be just as great, though the kinds furnished will not be the same. If this conclusion is correct there is little to worry about as yet in connection with the situation. Those who are thrown out of employment in one kind of munition production will probably

be able to find employment in factories engaged in other kinds of munition production, and there will not be any great amount of unemployment in Canada during the coming winter.

While it is reasonable to take this hopeful view of the matter after what has been said in the House of Commons, the uncertainties connected with anything depending upon the war situation make it inadvisable to count upon any prolonged continuance of the munitions industry. The end must come sooner or later, and undoubtedly a gradual diminution in the extent of the industry will be less harmful than a sudden stoppage. It is to be hoped, however, that the change, whether it is brought about suddenly or gradually, will not be inaugurated at the beginning of winter, but rather that it may come when winter is over and the distress accompanying unemployment during cold weather has not to be faced.

Ontario Forest Protection Proving Efficient

Excellent progress has been made by the Ontario Forestry Branch in the reorganization of the forest fire protection work, for which provision was made last winter by the Legislative Assembly, says "Conservation." This work has been vigorously carried forward under the direction of E. J. Zavitz, Provincial Forester; J. H. White, Assistant Provincial Forester, and L. E. Bliss, General Superintendent of Fire Protection.

The province is divided into three districts, with headquarters at Cochrane, North Bay, and Port Arthur respectively. Under the three district chiefs are 34 chief rangers, assisted by 31 sub-chief rangers. These men provide the immediate field supervision over the 986 rangers who do the actual patrolling and fire-fighting.

For the most part, the rangers work in pairs, travelling by canoe, and carrying their camp equipment and supplies with them. The general shortage of men, due to the war, has rendered it difficult in many cases to secure rangers. Much care has, however, been exercised to secure only competent men, and to weed out those who prove to be unfit for arduous duties. The chief rangers and sub-chiefs are in constant personal touch with their men, and the staff is rapidly improving in efficiency and team-work.

Communication and transportation, both of prime importance, have been greatly improved. Some 915 miles of old trails and portages have been cleared out, and 60 miles of new trails and portages constructed. Thirty-one lookout towers, from 24 feet to 80 feet high, have been built, and 22 more are under construction. Thirteen rangers' headquarters' cabins have been built, in addition to the repair of old ones. About 45 miles of telephone line have been erected. Five automobile trucks with fire-fighting equipment have been provided for districts where settlement is under way and passable roads exist.

The permit system of regulating settlers' clearing fires has been put into effect in the Clay Belt and is working very well. Over 1,200 permits have been issued to date. Its enforcement will no doubt greatly reduce the amount of fire loss in Ontario as it has already done in Quebec, British Columbia, Nova Scotia, and New Brunswick.

A change of policy of prime importance has been made effective this year, in that the work of fire prevention and control is no longer restricted to lands under license to cut timber or to forest reserves and parks. On the whole, all these are being given better protection than ever before, but, in addition, protection is being furnished over large areas of unreserved and unlicensed lands, containing enormous amounts of young forest growth, which will now have an opportunity to reach merchantable size while timber of merchantable size elsewhere is being exploited.

Last year the area of land under license to cut timber was 15,712 square miles. A fire tax of 1 cent per acre per year has been levied by the government, and should yield a revenue of upwards of $110,000. To this the province adds a sufficient sum to bring the total forestry appropriation up to about $375,000. The province can well afford this expenditure for the conservation of its forest resources, for last year the forest revenue amounted to $1,335,320. This is a decrease of nearly $200,000 from the previous year, and is directly attributable to the war. Under normal conditions the annual forest revenue will average from $1,500,000 to $2,000,000.

The Future of the Horse

While the horse has been superseded in many lines of work by tractors, trucks, and automobiles, it still has a large field of usefulness in logging operations as well as in many other fields. Sometimes lumbermen are led to wonder, however, whether the day of the horse is limited even in the logging industry. That they will still count largely upon the horse for many years to come is predicted by Dr. J. G. Rutherford, the most experienced veterinary surgeon in Canada, who has many years of government service to his credit. In an address before the Western Canada Irrigation Association recently, Dr. Rutherford said:

"As far as the light-legged horse is concerned he is practically doomed. The motor car has taken his place. Although still of some use in courtship, he will go out of business as soon as the self-guiding car comes on the market.

"For a number of years the heavy horse will be in demand. He is keenly in demand at the present time. Prices were never so high. After the war is over there will be a great demand for them in the countries now ravaged by war.

"I have in my possession an official publication from the Belgian Government giving many harrowing details as to what happened to the Belgian horses. The brood mares and foals running in the fields were slaughtered, being often used as targets by the German soldiers. One pure-bred stallion, valued at $10,000, was burned up in his box, while the groom and his wife and children were forced on their knees to watch the agonizing death of the noble animal. Then the Germans realized that they were making a mistake in destroying these valuable horses and began to ship them to Germany. They sent their experts to select the best individuals, giving to the Belgians for payment orders on the Republic of France, payable at Paris. These orders were in German, and were often for the most trifling sums.

"I have had interviews with representatives of all the large cartage companies in our cities, and they say that, so far as they have gone in trying out the motor trucks, they have found the horse much more satisfactory and economical. Whether the development of the motor truck, which until comparatively recent years did not receive as much attention as that of the passenger car, will be taken up with energy enough to make it sufficiently economical to supersede the horse I cannot say. The heavy farm tractor is a thing of the past. The light farm tractor has come to stay. So far as the horse business is concerned, a man can continue to breed heavy horses without any risk of market failure for at least ten or fifteen years to come."

The severe fires in Southern British Columbia late in July destroyed large quantities of young forest growth which had established itself on lands previously burned over, in addition to considerable areas of merchantable timber, says "Conservation." A portion of the young forest so destroyed was upon the area included in the great Fernie fire of 1908. Investigations made by the Commission of Conservation show that the damage done by repeated forest fires on a specific area is much greater than is generally realized. Such fires not only destroy the young growth, but the seed trees as well, thus preventing or greatly retarding the establishment of a stand of commercial species. On this account, in many sections, reproduction of valuable species is wholly inadequate, or is entirely lacking; each successive fire diminishes the earning capacity of the area, from the point of view of timber production.

Trade and Logging Conditions Reviewed

Manufacturers and Wholesalers Agree Regarding Difficulty in Summing Up Present Situation—Logging Costs Still Advancing

The Canada Lumberman has made enquiries, by correspondence, of a number of lumber manufacturers, wholesalers and retailers, in various parts of Canada regarding the market situation, with special reference to the outlook for logging operations and for prices during the coming winter. The letters published below are some of the replies that have been received. They will be read with interest by lumbermn. These letters show a complete unanimity of opinion in regard to the greatly increased cost of operation. They also show that most logging operators are finding it difficult to obtain sufficient labor, and that wages are higher than they have ever been before. Some operators are inclined to the belief that the labor situation will improve during the fall and early winter and that it will be possible to take out a moderate-sized cut at least. All agree that the cost of operation this winter will be very high. Most manufacturers and wholesalers are unwilling to express an opinion in regard to the probable course of lumber prices on account of the uncertainty connected with all the important markets.

Apparently most of the trade are looking anxiously toward the United States market, counting upon it either to keep prices firm or to be the cause of a fall in prices, according to whether the demand from across the line continues strong or falls off. This is a matter which cannot be foreseen at present, and, therefore, wholesalers and manufacturers, in most cases, are taking a cautious stand. In some cases our correspondents have preferred not to go on record with their opinions, and we have accordingly made use of the important portions of their letters without publishing their names.

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A Light Cut Expected in Nova Scotia

Editor Canada Lumberman: Bear River, N.S.

It is a bit early at the present time to report upon the outlook for logging operations during the coming year, yet some matters have developed, and we can perhaps give a fairly correct forecast of what is likely to occur.

As you may know, for the past two years we have been paying particular attention to hardwoods, making clothespins, dowels, etc. Owing to the embargo in the English market, we have decided to discontinue operations in hardwoods until after the war and in the meantime to turn our attention again to softwoods.

So far as we can learn, the quantity of softwoods—spruce, pine, and hemlock—that will be cut in the western part of Nova Scotia during the coming year will not be greater than was cut in 1916, and the cut in 1916 was about 50 per cent. of the annual cut hitherto for the past ten years. Various reasons may be given for this view, one of which is that there are in Western Nova Scotia at the present time some 50 to 75 vessels being built. The amount of wood used in the ordinary vessel is about 150,000 to 250,000 feet, depending upon the size. This, of itself, absorbs a substantial percentage of the quantity which usually goes into lumber. and takes the largest and best spruce timber.

Then the difficulty of securing tonnage and the extreme rates now being demanded make the business so uncertain, as well as unremunerative, that many people do not feel like taking the risk of what the future may hold along this line.

We shall ourselves probably put in a somewhat larger quantity during the coming year than we did in 1915 and 1916, for the reasons given above, always provided we can secure the necessary men to conduct the operations. This is an extremely difficult matter, and what influence the present conscription act may have upon the labor supply, already too scanty, we are not able to forecast.

There is, however, a great amount of uncertainty in any forecast one can make at this writing. Stocks of deals in the English market are lower than for the past fifty years, and, while the forestry battalions, both in England and France, may aid the situation somewhat, the time has about arrived when a further import must be made from this side of the water to relieve the situation on the other side.

The tonnage situation and the labor situation are really the keys to the present position, and what will develop in the next two months may be deemed a matter of prophecy, in regard to which one should be extremely careful.—Clarke Brothers, Limited.

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New Brunswick Manufacturers Reducing 50 Per Cent.

Editor Canada Lumberman:

As you are aware, the New Brunswick Government passed an order-in-council recently, doubling the stumpage rates. This, coupled with the extreme scarcity of labor and the fact that. whereas we were able to hire men last year for $35 to $40 per month, to-day the cheapest class of labor is asking $50, and the very marked increase in the provision prices makes it almost prohibitive to go into the woods.

The lumbermen met the government and placed the facts clearly before them, and hoped that the stumpage would be reduced to $2 per thousand. They. however, did not take our view of the matter sufficiently seriously, and only made a reduction of 50 cents, or placed the stumpage at $2.50. Usually at this time of the year we have our logging arrangements made, but, up to this moment we have not made any arrangements, nor have we had one of our operators call upon us looking for a contract.

I have heard the matter discussed by quite a number of our prominent lumbermen, and all are of the impression that the operations will be decreased 50 per cent. So far as we are concerned, it looks as if we would only get out about 40 per cent. of what we had last year. Some of the larger logging men are not going into the woods at all, as they state that, with the high cost of provisions and the great uncertainty of men—irrespective of the high wages—they would be taking too much chance.

All the mills here have their yards piled to their full capacty. as there was only one steamer taking a cargo of about three million from this port this year. In view of this, I do not see where the millmen could pile their next year's sawing, provided they got the logs out, so that I am looking for a difficult year for the lumber business on the Miramichi. Conditions may change materially between now and the close of navigation. I am not usually a pessimist—in fact, I think I am rather optimistic, but I really do not see much to encourage optimism in the present situation.—New Brunswick Manufacturer.

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Heavy Curtailment Probable on New Brunswick North Shore

Editor Canada Lumberman: Bathurst, N.B.

Up to the present very little logging has been done in this part of the country this year. The conditions are such that there is bound to be quite a large curtailment this year in cutting operations in the woods.

We cannot see any profit in the lumber business for next year, even if prices were increased somewhat above the present level. Men are scarce and independent, supplies very costly, and the transportation situation is most serious; absolutely no tonnage for export, and cars so scarce that we cannot secure 25 per cent. of our requirements. Altogether there are so many unfavorable conditions and such difficulty to do any business that it is not worth the exertion required to carry on. We think that if the lumbermen of the country would take a year's rest. and do absolutely nothing, it would have a most favorable effect. In the interval we could devote ourselves to the shipping of any stock we have in pile, and get ready for the adjustment that is coming along very shortly. The labor situation alone is so serious that little or nothing can be accomplished, and until this difficulty is corrected no satisfactory trade can be done. So long as we attempt to go ahead this trouble will increase, and it seems to us a complete suspension of cutting and sawing is the only cure for our industry.—Bathurst Lumber Company, Limited.

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Miramichi Output to Be Curtailed

Editor Canada Lumberman: South Nelson, N.B.

There is very little we can report from here in regard to the lumber situation. The mills have been sawing all summer and yarding their stock. With the exception of a limited quantity which went forward by rail and a few hundred standards shipped as part cargoes of two steamers, nothing has gone forward from this port. The result is that the yards are full to almost their capacity, with no immediate prospect of relief in the way of transportation. It is true that some of the stocks are sold by the manufacturers, but this does not relieve the situation as far as yarding is concerned. There is very little, if any, movement for the coming winter's operations. The operators are faced with full yards of manufactured goods, excessive prices for all kinds of lumbering supplies, shortage of labor, and high wages for what there is, an advanced rate of stumpage on crown land leases, and uncertainty of conditions in the spring. In view of all this, it seems at present that the cut the coming winter will be very much curtailed.

We cannot give you any further information regarding the situation at present.—George Burchill & Sons.

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New England Spruce Prices Higher

Editor Canada Lumberman: Boston, Mass.

Eastern spruce has taken quite a jump of late, but whether the prices will be sustained is quite a question. We do not think an increased demand for Eastern spruce has caused this advance, but rather a general feeling among the trade that the lumber is worth more than they have been asking. Spruce frames on a $40 base for 8 in. and under are in good demand and will sell at that price, and probably advanced prices can be got for the wider stock, but random is of rather doubtful sale. We think things are quieting down here, more or less. We do not look for a very active fall in the general trade about the New England States, and we think the same conditions obtain in the Ottawa district. However, there is a great deal of war business yet, even in

lumber, and that seems to keep things moving, although it certainly seems to us we are not likely to see quite as active business during the next six months as we have had in the last six.—Shepard & Morse Lumber Company.

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Eastern Box Makers Busy

Editor Canada Lumberman: St. John, N.B.

As the box business is very brisk and we find the volume of our business steadily growing, we are figuring on getting out for the coming winter fully as many logs as we got out last season. The cost is likely to be even higher than last winter, but we are obliged to carry large stocks of dry lumber if we hope to continue to maintain successfully and develop the box business. Narrow spruce side boards, 4, 5, and 6 inches, are at present selling here with comparatively light stocks in sight at $24, with wider stock in proportion. In fact, the box men will be obliged to advance their prices sharply unless there is an easing off in prices, which is very unlikely to happen at this season of the year.—Wilson Box Company, Limited.

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Fifty Per Cent. Curtailment in Nova Scotia

Editor Canada Lumberman: New Glasgow, N.S.

It is almost too early yet to know just what logging work will be undertaken this winter. It is safe to say, however, that the operations will be on a very limited scale. The scarcity of labor, the increased cost of supplies, and the high rate of wages will all tend to a curtailment. Over and above these conditions is the fact that the British market is practically closed, and it is to this market that most of our Nova Scotia lumber is exported. The only compensating feature is that the local market is exceptionally good. My present judgment would be that there will not likely be more than one-half of the customary cut made in Central and Eastern Nova Scotia next winter.—R. M. MacGregor.

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Outlook Uncertain

Editor Canada Lumberman: Montreal, P.Q.

The lumber situation at present is in a rather precarious state. The demand for common lumber is exceptionally good and prices are firm, but, owing to the lack of shipping facilities to the British market and the Argentine, a great deal of lumber is being held over, which may show a loss when shipping facilities are restored to normal. The cost of manufacturing, so far as I can see is very high. Wages and everything else have advanced greatly, so that if the demand is not any too good in 1918, there may be a reaction in prices.—Montreal Wholesaler.

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Not Anticipating Much Difficulty at Present

Editor Canada Lumberman: Hull, P.Q.

It is early yet to give you an idea of what we may be able to get of logs this coming winter. You know the saying about "man proposes." We are just beginning to send men into the woods. Our purpose is to take out our usual cut—about 25,000,000 feet. So far we have had no trouble to get men. Whether we take 25,000,000 feet or 20,000,000 feet will depend on the men being available when the harvest is complete. We are not anticipating any great difficulty at the present time.—Gilmour & Hughson, Limited.

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May Be 50 Per Cent. Short

Editor Canada Lumberman: Lyster, P.Q.

Owing to the scarcity of men, indications are that we will be over 50 per cent short in our logging operations for the coming season. It is rather early in the season for us to give you any definite figures, but the situation, as it stands at present, does not look too encouraging.—The Lotbiniere Lumber Company.

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Scarcity of Labor Reducing Output

Editor Canada Lumberman: New Richmond, P.Q.

Owing to our inability to secure tonnage to move this season's cut, we only intend to get about two-thirds of our usual cut of logs during the coming winter. Labor is very scarce at present, with wages 25 to 30 per cent. higher than last year.—Montgomery & Sons Company, Limited.

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Difficulty in Getting Labor

Editor Canada Lumberman: Sherbrooke, P.Q.

We regret that we cannot give you any reliable information as yet in regard to the outlook for logging operations during the coming winter, on account of the difficulty in getting labor during the past season.—Eastern Townships Lumber Company, Ltd.

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The Georgian Bay Shook Mills, Ltd., Midland, Ont., report that they will not be taking out any logs during the coming winter.

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Alberta Retailers Report Good Prospects

Editor Canada Lumberman: Leduc, Alta.

Prospects are very favorable for a good fall trade. Crops are good, with the exception of a small strip which suffered badly through hail. Portable mills west of here are planning on quite a heavy cut of lumber this coming winter.—J. F. Stiles.

Ontario Reports on the Outlook

Curtailment Likely to Be Heavy

Editor Canada Lumberman: Marmora, Ont.

So far as we can see at present, the costs of logging operations during the coming fall and winter are likely to be higher than ever. Wages are still advancing, and experienced loggers seem to be very scarce. The fact is, that the higher wages go the poorer seems to be the quality of the labor obtainable. Almost all classes of supplies are still soaring. Prospects, however, are that hay, oats, and potatoes will be considerably lower. While this may help to reduce logging costs, the relief will be small, in view of the increased cost of almost all other classes of supplies.

In view of these conditions, we do not see any prospect of a reduction in the selling prices of lumber for some months to come. While we hope to get out about the same quantity as last year, this will depend entirely upon the supply of labor. The total lumber production in this district is likely to be still further curtailed on this account. There is no dry stock that we know of in this district. We have had to ship very largely direct from the mill practically all season. The new Military Service Act may still further reduce the labor supply, but so far as this immediate section is concerned it is not likely to be felt as much as in some other places, owing to the fact that nearly all our young men have already enlisted, and we have practically no unmarried men on our pay-roll. We understand that the American Government has made, or is making, arrangements to take every available foot of hardwood lumber on the other side of the line, and this will have a tendency to stiffen the prices of these woods in this country.—The Pearce Company, Limited.

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Expecting Lower Prices for Some Hardwoods

Editor Canada Lumberman: Toronto, Ont.

It is the writer's opinion that hardwood purchases at mills should be and will be at a considerable amount less than the present market prices. The demand for ammunition box ends put a premium on low end 1 in. hardwood to the extent of from $6 to $8 over what it could be sold at for ordinary commercial purposes. This would have to be taken into consideration in purchasing new stock.

It is the writer's opinion, however, that 1¼ in. and thicker lumber will remain, in the common and better grades, at close to the present market prices. Another factor will be that the banks may not be in a position to finance automobile and piano manufacturing firms to the extent which they would like, and still another factor will be the embargo by the United States Government on steel plates. If the automobile and other firms cannot get their steel plates they cannot manufacture, consequently they will not require the lumber needed in the construction. This will lessen the demand, and, of course, the price will have a tendency to sag.

In summing up, the writer would say that he would not contract with any mills at the present market price for their output, but would consider doing so at a price that would take into consideration the factors which may govern trade.—Hart & McDonagh.

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Prediction Would Be Only a Wild Guess

Editor Canada Lumberman: Toronto, Ont.

I cannot offer any opinion at present in regard to the lumber trade situation, as anything I might say would be simply a wild guess. We are all in the same boat, groping in the dark and taking chances. One can predict higher prices and give good, substantial reasons to show why they should be, whereas another can predict lower prices and give equally substantial reasons why they may be expected. Just at present, however, I am not looking for any increase in price, but would not care to hazard an opinion for publication. The only thing I would say is that, unless the American market calls for a larger amount of stock, I think we will see a slight recession in the price of lumber and in a number of other commodities, as well as in wages.—Toronto Wholesaler.

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Will Take Out a Full Cut

Editor Canada Lumberman: Keewatin, Ont.

We hope to be able to put in a full supply of logs this season. Just at the present time men are hard to get. We expect they will be easier after the harvest.—Keewatin Lumber Company, Ltd.

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Conditions All Pointing to Firm Prices

Editor Canada Lumberman: Sarnia, Ont.

We are satisfied that the stock of white pine in the hands of the manufacturers and wholesalers is considerably less than normal. We are also satisfied that the stock held by the retail yards is, generally speaking, very small. They have all been buying from hand to mouth, due to the advanced prices. When we visited operating headquarters of a number of large lumber companies a few weeks ago they were all very short of men and putting in a small number of camps. They cannot afford to take any chance on the market, as their operat-

ing costs are extremely high. With even the normal demand for white pine and hemlock lumber prices are bound to remain firm. If the United States is busy manufacturing war material next spring, lumber prices will advance materially. —R. Laidlaw Lumber Company.

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Putting in One Extra Camp

Editor Canada Lumberman: Ottawa, Ont.

We are putting in an extra camp in the woods this season, but so far we have found it very difficult to get help. We do not, however, contemplate that this condition will continue a great while, as the help for the East, down Gaspe way, has not started to arrive as yet. We understand that some of our neighbors are increasing their woods operations this season very much.—Shepard & Morse Lumber Company.

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Logging Conditions More Difficult Than Ever

Editor Canada Lumberman: Penetanguishene, Ont.

We expect to put in about as many camps as last year, although last year's operations were hampered on account of labor shortage, and up to date this year it looks as though it may be worse. With all materials—feed, wages, etc. —so very much higher, we do not know just where we will get off at, but we are hoping that sellling prices will continue to hold up.—The C. Beck Manufacturing Company, Ltd.

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Colonial Taking Out Their Usual Cut

Editor Canada Lumberman: Pembroke, Ont.

We expect to put in the usual number of camps this season and take out from fifteen to twenty million feet, provided we can get the men. Just at present we are having great difficulty in filling up the number of camps already started, but prospects a little later on may be brighter.—The Colonial Lumber Company, Limited.

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Expect a Steady Market

Editor Canada Lumberman: Ottawa, Ont.

As we find matters, the demand is not as good for building purposes, but there are other requisitions coming in which, we think, are going to more than offset the slackening demand for building, and we anticipate that prices will remain at least at their present level.—Fraser, Bryson Lumber Company, Ltd.

Winnipeg Wholesalers Organize

Wholesale lumber dealers of this city have formed an organization to be known as the Winnipeg Wholesale Lumbermen's Association. The organization consists of the larger number of the lumber wholesalers, commission men, and mill representatives in this market.

Winnipeg is the buying centre for a considerable part of the lumber business conducted by the yards of the Western provinces. A number of line yards, with branches numbering from 25 to 100, have their headquarters at Winnipeg, and practically every mill of importance in the West has a sales representative in this market. The officers of the newly-formed association are representative men in the business, and this makes it certain that the association will be conducted along lines which will prove beneficial to all branches of the trade.

The officers and directors are as follows:

President—W. B. Tomlinson, of Tomlinson & Mitchell.

Vice-President—H. E. Deneen, of Shevlin-Clarke Company, Ltd.

Secretary-Treasurer—W. P. Dutton, of the Great West Lumber Company, Ltd.

Directors—H. E. Deneen and D. J. McDonald, of McDonald Lumber Company; H. S. Galbraith, of H. S. Galbraith Company, Ltd.; H. C. Hodgson, of the Vancouver Lumber Company, Ltd.; W. E. Allen, of the Finger Lumber Company, Ltd., and J. M. McNicol, of Stout & McNeil.

Lumbermen in an Automobile Accident

While travelling in an automoblle between North Bay and Callander on Sept. 12, Mr. H. G. McDermid, of the Union Lumber Company, Toronto; Mr. S. Mulholland, of the Callander Saw Mills Company, and Mr. George Ingram, of the Standard Planing Mills, North Bay, met with a serious accident. A blowout in a front tire caused the car to turn completely over. Mr. Mulholland and Mr. McDermid were caught underneath the car. Mr. McDermid sustained a broken rib and a number of bruises about the neck and head. Mr. Mulholland received the worst injuries, suffering a broken leg. Mr. Ingram escaped with a bad shaking up. Mr. McDermid and Mr. Mulholland were removed to the hospital at North Bay. Mr. McDonald subsequently returned to his home in Toronto, and Mr. Mulholland is making satisfactory progress at North Bay.

In order to save for the Indians of Canada their large timber holdings against loss by forest fires the Indian Department at Ottawa is obliging licensees to pile and burn their "slash" after taking the logs out of the woods. The precaution will save numerous bad.

R. L. McCormack, Toronto, Killed in Automobile Accident

As the result of an automobile accident on Sunday, September 23, Mr. Robert Latham McCormack, of the firm of Gibson, McCormack, Irvin & Co., lumber and coal dealers, Toronto, met with instantaneous death. The news was a great shock to his wide circle of friends in the lumber trade. The accident occurred at about noon, a mile and half from the village of Vivian, where Mr. McCormack and some friends had been visiting the old McCormack homestead. On a stretch of sandy road, flanked by a ten-foot embankment, Mr. McCormack lost control of his machine and the car went over the embankment and turned completely over. Mr. McCormack and his 11-year-old son and Mrs. William Sharpe were pinned beneath the car. Senator William Sharpe, who was also in the party, was thrown free and not seriously injured. The young son of Mr. McCormack managed to extricate himself and to summon assistance in a short time. Mrs. Sharpe sustained several broken ribs and a number of bruises. The boy, Samuel McCormack, escaped without any injuries.

The late Mr. McCormack was a leading business man of Toronto, being identified in a prominent way with the firm of Gibson, McCormack, Irvin & Co., the Conger Coal Company, the Toronto Feed and Produce Company, R. L. McCormack & Son, real estate and insurance brokers, the Crown Life Company, the Merchants' Fire Insurance Company, and the Gould, Leslie Bill Posting Company. As a young man he entered the lumber business with his father and brothers in the village of Vivian, and later moved to Toronto, where he went into the lumber business with his brother-in-law, Mr. Michael Jackson.

Mr. McCormack is survived by two sons who are at the front, the young son who was in the motor car at the time of the accident, and five daughters.

The funeral took place on Wednesday, September 26, from Mr. McCormack's late residence on Annette Street to Prospect Park Cemetery, and was very largely attended, the lumber trade of the city of Toronto being represented in a body.

Wooden Tea Trays Wanted in Great Britain

The Canadian trade commissioner at London, Eng., in a recent report, says:

In the course of an enquiry instituted upon behalf of a Canadian manufacturer it has been ascertained that very large quantities of tea trays, mainly oak, almost exclusively of German manufacture, were imported into this country previous to the war, and as dealers report that the efforts of British manufacturers to replace this source of supply have so far not been satisfactory, there should be a good future opening for the Canadian article, provided that patterns can be furnished which are in established demand here and that the trays can be laid down at competitive prices. The demand is principally for a plain and inexpensive type, and the sale of inlaid and more costly trays is comparatively small.

The first of these conditions, however, necessitates a considerable departure from many of the types of trays which are manufactured for Canadian use, and in the case of some of the trays which are the best sellers in Great Britain, the production of special designs.

It is also certain that Canadian prices are much too dear, present quotations being considerably in excess of current values, and about double the price at which German trays were delivered in this country before the war.

As, however, large quantities of these tea trays are sold in this country and leading dealers would be prepared, if satisfactory arrangements can be made, to contract for large and regular supplies, the possibilities of the trade deserve the attention of Canadian manufacturers. It should be an easy matter to adopt such alterations as are necessary, while production upon a large scale should permit of a considerable reduction in cost, and enable Canadian manufacturers to fall more into line with the views of buyers in this country.

In London alone some of the principal firms dealing in these tea trays express their willingness to go into the matter thoroughly with Canadian manufacturers who are adequately equipped for handling the business.

For the time being the importation of tea trays, like other manufactures of wood, into the United Kingdom is entirely prohibited, but it is a favorable time for investigating prospects for the future.

Wilson Lumber Company's New Manager

Mr. P. Bass, who has been connected with the Dermott Land and Lumber Company, of Dermott, Ark., and Chicago, Ill., for the past five years, has resigned his position as assistant sales manager of that company to become general manager of the Wilson Lumber Company, Ltd., Toronto, Ont.

The Wilson Company, besides operating a wholesale hardwood business at Toronto, owns and operates the Mississippi Hardwood Company, of Jackson, Miss., which has a band mill of about 25,000 feet capacity, cutting mostly poplar, oak, and gum.

Douglas Fir to Be Used for Airplanes

The West Coast Lumbermen's Association, Seattle, Wash., reports that a contract for 25,000,000 feet of Douglas fir for airplane construction has been placed by the Italian Government. The fir is to be substituted in place of spruce, and a great deal of interest has been awakened by this contract, as it was formerly thought that fir was not suitable for aeroplanes. If it is found to be suitable, the problem of supplying aircraft lumber will have been solved.

Specifications from the Italian Government for 25,000,000 feet of Douglas fir, orders for which were placed recently with the West Coast Lumbermen's Association two weeks ago, have been received. The specifications read as follows:

Specification.—Ten per cent. 2 x 4 inches and wider, advancing by 1 inch; no average width guaranteed.

Ten per cent. 3 x 4 and 5 inches; no special amount of each.

Eighty per cent. 3 x 6 inches, 7 and 8 inch or wider; no specified amount of each and no agreed average width.

The 10 per cent. 2 x 4 and wider and the 10 per cent. 3 x 4 and 3 x 5 are put in at mill's option, and they may undership either or both of these sizes as much as they like and increase the 80 per cent. 3 x 6, 3 x 7, and 3 x 8 and wider to offset.

Lengths.—Ninety per cent. each dimension 18 to 40 feet, average 24 feet or more. Ten per cent. 12 to 17 feet not included in the 24-foot average. Odd and even lengths may be shipped at mill's option.

Quality.—Rough green fir at mill's option to ship dry or partly dry at same f.o.b. mill prices, underweights and/or overweights for buyer's account.

Grain.—All to show edge grain on the wide face side—i.e., either vertical or within an angle of 45 degrees from vertical. Not less than six annual rings to one inch; no cross grain or burly grain or curly grain to be admitted.

Sap.—To be bright, and to be allowed in any one piece up to one-fourth the width and one-third the length.

Pitch-Pockets.—Will allow in any one piece one pitch-pocket up to 2 inches long for each 16 lineal feet.

Knots.—Ninety per cent. to be free from knots on all four sides.

Ten per cent. to allow in any one piece one knot up to ½ inch in diameter.

It is mutually understood and agreed that the above description of this special grade describes the low line of limitation as is usual in lumber grades, and that shipments on this order will contain all of the product of this grade and better that is produced when cutting the same. In other words, no portion of the higher grade material shall be selected out and retained by the mill.

Manufacturing.—Must be uniformly sawn. All to be free from chain marks, dog marks, and no hooks to be used in the handling or loading of this stock.

Tally and Inspection.—Tally and inspection at loading mill to be by Pacific Lumber Inspection Bureau, in accordance with special clear quality herein specified, certificate to be furnished and to be final. Buyer's option also to inspect at leading mill in accordance with same special clear specifications herein mentioned, and any difference between the two inspectors to be settled by the chief supervisor of the Pacific Lumber Inspection Bureau, or his assistant.

Australian Imports of Timber

The Weekly Bulletin of the Department of Trade and Commerce publishes a report from the Canadian trade commissioner at Melbourne, Australia, as follows:

Through the incidence of the war, scarcity of tonnage, abnormal marine freight, and the consequent decline in constructional work in Australia, the total importations of timber (lumber) decreased from £2,922,578 in 1913 to £2,153,469 in 1914-15, and, further, to £1,721,819 in 1915-16. The recent marked advance in prices on the Pacific Coast is causing apprehension to Australian importers of Douglas fir. The attention of dealers has been recently diverted to New Zealand woods not hitherto extensively placed on the Australian market.

Present indications are not hopeful for an early improvement for British Columbia exporters. The trend of the importations from North America is shown thus:

	1913.	1914-15.	1915-16.
From Canada	£ 67,981	£ 17,653	£ 4,363
From United States	1,511,615	1,021,175	858,716

Imports from Canada in 1915-16 were valued at £4,363, whereas in the previous year the value was £17,653. Imports from New Zealand were valued at £483,055, against £469,422 in the preceding year. From Japan the value was £88,872, against £67,017. Imports from the United States fell off to £858,716 from £1,021,175.

More than two-thirds of the technical foresters in Canada in 1914 have seen military service at the front. The enlistment of forest rangers has likewise been heavy.

Under-deck Shipments to be Permitted

A cablegram from the United States Consul-General at London states that the British Controller of Timber Supplies announces that applications for licenses to import timber from Canada and the United States will be recommended on the following terms: "In any unrequisitioned space under deck of British or allied steamers and in neutral steamers, if approved by inter-allied chartered executive. Timber must not displace foodstuffs or munitions. Shipment must be within three months of application. Importers must be bound to sell softwood at cost plus 10 per cent., provided price so calculated does not exceed by one-third prices current during last week January, 1917."

From the Canada Lumberman of Thirty-five Years Ago

Hamilton's Timber Shipments

Hamilton, April 1, 1882.—Hamilton is one of the chief ports on this lake at which square timber is received from the back country and shipped to the sea coast. Some timber has already arrived at the booms of the Great Western and Northwestern Railways. The timber already here belongs to Messrs. Flatt & Bradley, of Hamilton, and Murphy, of Quebec. The Wellington, Grey, and Bruce branch of the Great Western and the Georgian Bay branch of the Grand Trunk bring the larger quantities. The Grand Trunk timber comes from about Wiarton. Flatt & Bradley began rafting operations lately. The quantity of timber that will come to Hamilton this year will be less than half the quantity handled last year. The timber will go down to the sea in rafts, very little going by vessel. Staves will be shipped in greater quantities than last year. The business of last season was larger. Thirteen rafts and twenty cargoes of square timber, about 1,600,000 cubic feet, were sent down, besides a raft of spars and masts for Boston. In addition to timber shipments, several cargoes of pipe and West India staves were shipped for the English market. The total value of these shipments exceeded $600,000. The railways delivering the timber received $35,000 for freights, and the cost of making up the timber into rafts for towing to Quebec was between $30,000 and $40,000. The past winter was such an open one that but little timber was cut, and thus the shipments fell off, but on account of the increase in the quantity of staves, business for vessels will be better in that line. Freights are dull, and the only charter reported by Hamilton parties is from Lake Erie to Garden Island, at a figure lower than last season's rates.

Chignecto, N.B., Hemlock Lands.—There can be no doubt but it is a bad policy for New Brunswick to sell hemlock lands to manufacturers of tanbark extract. There is a limit to the quantity of such bark in the province. It ought to be saved. New Brunswick is placed in a position to do the tanning for the Dominion. None of the Western provinces have much hemlock, but the Far West will produce great quantities of hides. The rich pasture lands of British Columbia and of the states further east than there, are destined to feed the herds and flocks which will supply meat to Europe. No doubt the exportation will be largely in the shape of dead meat, fresh and in barrels. The hides should be tanned in Canada, and where so conveniently as in New Brunswick? But it will not take long for men like the Millers, and all credit is due them for their energy, to strip our forests of the hemlock bark and leave the trees, scattered through the woods, a temptation to fire. Whatever may be the motives of Mr. Sayre and his friends in resisting the sale of the lands, there can be no doubt that great care should be taken not to allow our province to be stripped of her wealth for the sake of the trifle that is gained.

Using Short Length Hardwood Lumber

There was a time when all hardwood less than four feet long was thrown away, but to-day many manufacturers are finding a profitable market for this class of stock. For example, pieces 2½ feet in length and 6 inches and up in width are now being saved and shipped to manufacturing plants. White oak and hickory blocks of this character are shipped to factories to make wagon and buggy spokes, while red oak and water oak blocks go to furniture factories to make small articles of furniture.

J. M. Donovan, wholesale lumber dealer, has opened an office at 923 Traders Bank Building, Toronto. Mr. Donovan will handle the product of several important lumber manufacturers, among them being the Brunette Saw Mills Company, Ltd., of New Westminster, B.C., and the Coulson Lumber Company, of Memphis, Tenn.

Cost Accounting for Wooden Box Plants

National Association of Box Manufacturers Adopt System Worked Out by Special Committee and Recommend It for Use*

(Continued from September 15 issue.)

Productive Labor.—The term "productive labor," as here used, is intended to mean all that labor which can be definitely measured against production orders. It is sometimes argued that all factory labor is productive labor, which, in a sense, is true, but inasmuch as the cost of productive labor is to be the basis upon which all other expense shall be distributed to production orders, it is absolutely necessary that there be nothing in this item of cost except what can be definitely measured into the production orders.

In the paragraph entitled "Pay Roll Account" the method of arriving at the total productive labor was described. We shall now determine how much of this total is for sawing, matching, printing, lock-cornering, nailing, and all the other operations of a similar character. The forms shown in Figures 5, 6, and 7 are factory production reports, and are filled out by one workman at each production centre. Fig. 5 is used on the saw line only. Fig. 6 is used at all the other machines. The kind of work is indicated by the number of machine which performed the work. Fig. 7 is used by the handworkers. These reports are sent to the office daily, where the elapsed time is extended and postings made to each job cost sheet. The production reports are then ready for the tabulation from which we learn how much labor has gone into each operation. A few columns of such a form are shown.

Number		Set No. 1.	Set No. 2.	Mch. No. 10.	Mch. No. 15.	Mch. No. 20.
Kind of mch....		Saws.	Saws.	Matcher and squeezer	Printer.	Nailing set.
Rate per hour...		77½	77½	70	50	85
Month.	Day.	Hours.	Hours.	Hours.	Hours.	Hours.

The rate per hour in the foregoing is the combined rate of all the workmen engaged at these production centres. It is not essential that these rates taken in the changes which take place from day to day, but they should be sufficiently high to cover the pay of the best paid workmen. At the end of the month footings are made and extended at the rates shown. The totals are footed and the results compared with the total of productive labor in the pay roll account. If a difference exists, it should be slight, and in that case would not affect the percentage of burden. The purpose of this record is to determine to what extent the productive labor on pay roll has been absorbed in the job costs.

Non-Productive Labor.—Non-productive labor is that labor in a factory which cannot be identified with any production order, but applies to the entire mass passing through the factory. It consists principally of superintendence and maintenance of buildings, machinery, and equipment, and becomes part of the factory burden.

Rental, Liability Insurance, Fire Insurance, Taxes.—Expenses of this nature are invariably paid by the year; therefore, it would be improper to charge the total amount of such payments to the operations of a single month. Provision is made to carry only that proportion of this expense into the monthly factory burden account, which will consume the entire payment at its maturity.

This is an element of cost which does not necessarily occasion the outlay of money. Yet it is very vital that it be considered as an item of expense. Wear and tear is constantly taking place which cannot be overcome, no matter how perfectly the facilities are maintained in good working order. Obsolescence takes place—that state of being when the facilities of to-day are made useless, or uneconomical, by new inventions or other improvements. Beyond these reasons the consumer should pay something for the investment in plant made necessary to provide him with packages economically. If the investment of money in a box manufacturing plant does not pay for itself during its life, which is from ten to fifteen years, besides paying during this period a fair trading profit, then the enterprise cannot be considered to have been profitable.

For these reasons a reserve is created each month. If this is made at the rate of 10 per cent. per annum on the value of machinery and equipment, and 5 per cent. per annum on the value of buildings, a fair charge is established. A greater percentage is permissible for the depreciation of motor trucks, horses, and wagons.

This account is not closed out at the end of the year into profit and loss, but is carried as a reserve. In the financial statement it is used as an offset against the book value of these properties.

Factory Maintenance — Building Expense, Saws and Knives.—These accounts are established for the purpose of segregating, as far as it is thought desirable in each particular case the expense of the business. Other accounts of a similar character may be opened to suit the convenience of existing conditions.

All of these accounts at the end of each month are closed into the factory burden account, except where a monthly inventory of repair parts is maintained. In that case the amount of inventory is carried forward as a balance. Sometimes also extraordinary repairs are undertaken which it would be unfair to charge against one month's operations. In that case it is determined in advance over how long a period these charges should be spread, and only such proportion will be admitted to the monthly operating accounts as one month bears to the whole period.

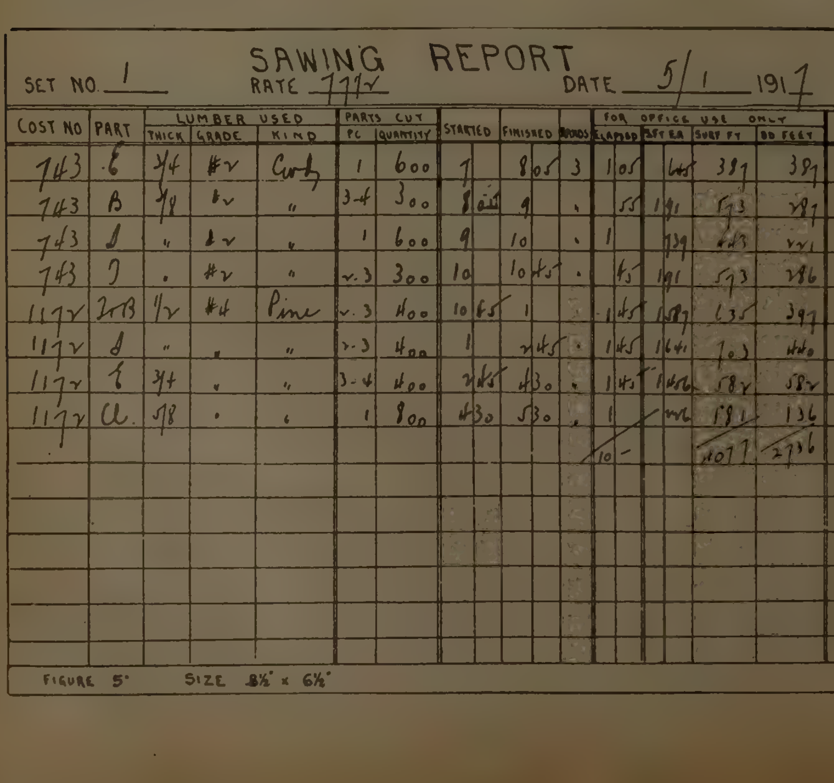
Power.—This account is charged with the wages of engineer, firemen, oilers, the cost of fuel, the purchases of repairs for the powerhouse and its equipment, and fixed charges, such as insurance and depreciation.

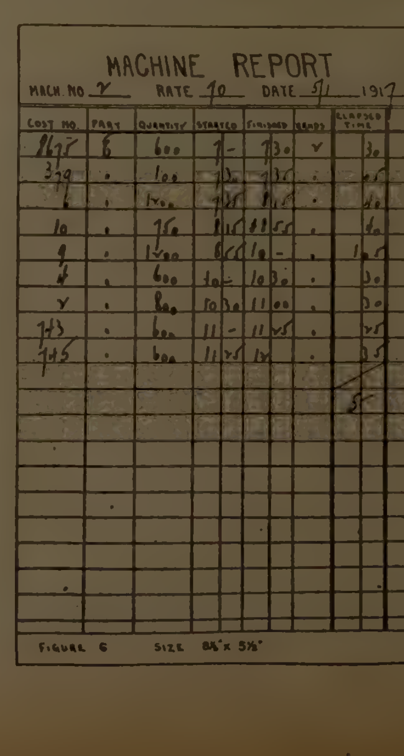
The cost of fuel is not fully covered if only the purchases of coal are considered. The shavings, sawdust, and offal should be charged for if these are used for fuel. The box manufacturer who finds a market for this creates a source of revenue. The manufacturer who consumes it for fuel has also found an economic use for it, and is entitled to a revenue therefrom. This is customary in other lines—as, for example, in the steel business, shavings, and borings are sold, and in the printing trades the trim is sold. In both cases the consumer is charged with the whole cost of material.

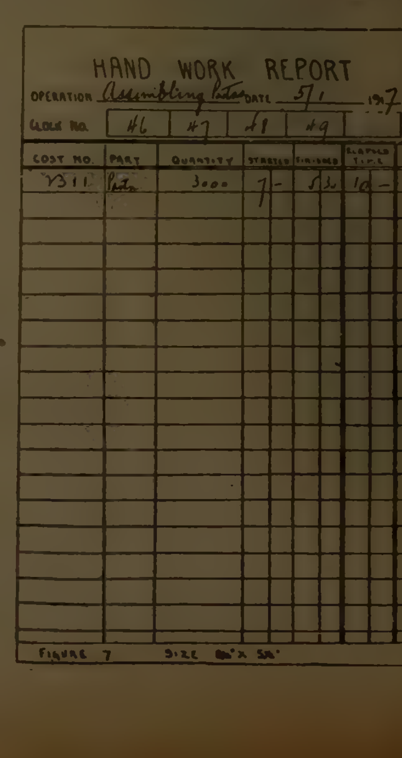
To establish a basis for charging this material to the power account the following plan is recommended:

When a 1 in. board is resawed and surfaced to ⅜ in., 25 per cent. of it is converted into shavings and sawdust. When a 1 in. board is

* Reprinted from Barrel and Box.







surfaced to ⅞ in., 12½ per cent. is converted into shavings. It would hardly be practical to reduce the percentage to an exact mathematical calculation; therefore, each manufacturer must determine the approximate amount of this waste material which is used for fuel—likewise, the price at which it should be charged to his power account.

The basis of price, where practicable, may be set according to the market conditions for this commodity in each particular locality.

In a plant where a part of the production of shavings, sawdust, and offal is sold for other purposes a deduction for the quantity sold should be made from the tonnage produced before the charge against power is determined.

A charge of this nature should be made into the power account in every instance where this material is used for fuel.

In plants where power is produced solely for the box factory the account is transferred into factory burden. Where, however, other producing departments are conducted and supplied with power from the same source, the charge should be pro-rated equitably between these.

Factory Burden.—This is the clearing account for all those accounts in which the factory expenses are detailed. It is provided for the purpose of localizing this class of expense, so that when transferred to the box account the relation between productive labor and factory burden can be seen at a glance.

Administrative Expense.—This is sometimes called the "General Overhead Account," and is composed of all those expenses incurred in the conduct of the business which are not directly chargeable to the factory. For the purpose of further analysis, the items comprising this account may be carried on the books in as many separate accounts as is thought necessary; but, like factory burden, these should be localized in this one account before being transferred to the box account, so that the aggregate of this class of expenses may also be distinguished in its relation to productive labor.

Teaming.—Charges to this account should include all expense incidental to the maintenance of a wagon delivery service. It should also carry a fair proportion of such fixed charges as depreciation and insurance.

A record is kept of the number of hours and kind of service rendered the several departments. By kind of service is meant whether singles or doubles were furnished. Upon the basis of this information the charges are distributed to the various departments in proper proportion.

Delivery service cannot very well be distributed to box production orders on a percentage basis. Length of haul, number of boxes on the load, and conditions in the locality of the factory all play a part in the equitable distribution of this expense. It is therefore left to the best judgment of each manufacturer to solve his own problem.

Note.—These costs are based on f.o.b. factory.

Box Account

In this account all of the factors of production cost are brought together with the value of product. The difference between debit and credit represents operating gain or loss. The quantity of waste in the month's production is found by deducting the number of feet shown in the credit entries from those shown on the debit side of the account. To find the percentage it is necessary only to divide the number of feet wasted by the sum of feet consumed, and in inventory at the beginning of the month. To find the percentage of factory burden and administrative expense, divide each of these elements by the amount of productive labor. Each element of cost is shown in its proper relation to the whole, and a basis is established upon which these elements may be distributed to the job costs. The detail of job costs will be taken up in another paragraph.

The credit in this account for sale of boxes and shooks represents

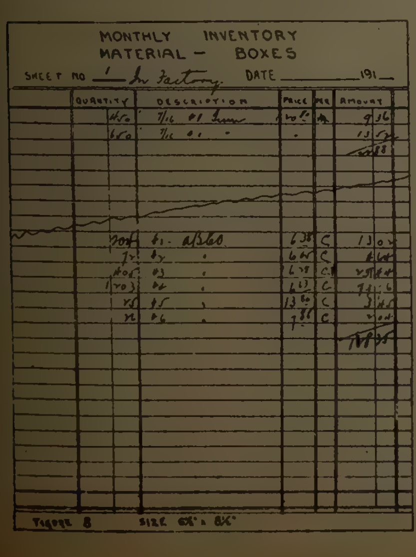


FIGURE 8 SIZE 6⅞" x 8⅞"

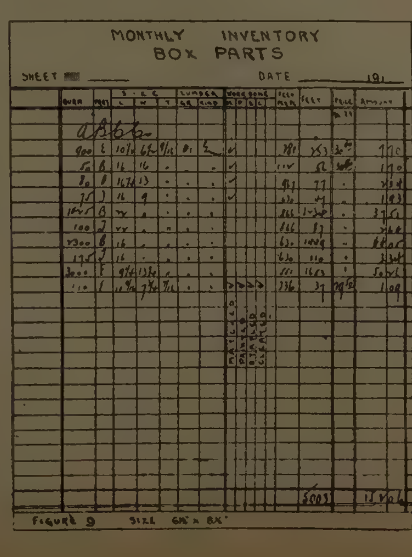


FIGURE 9 SIZE 6⅞" x 8⅞"

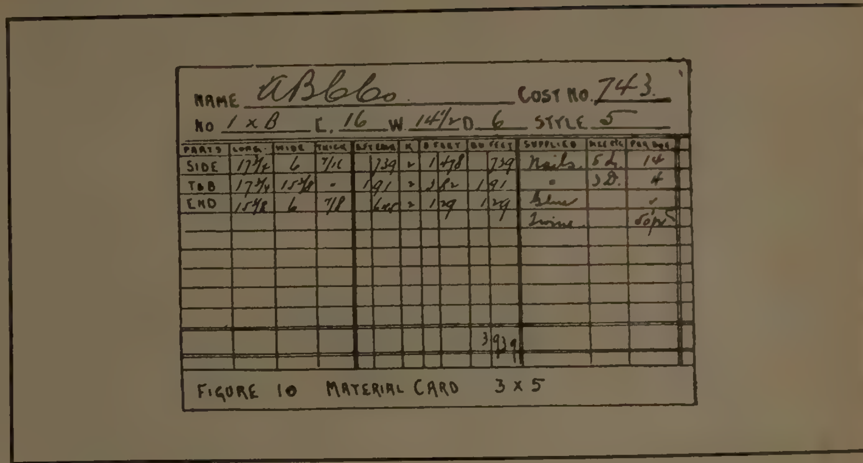


FIGURE 10 MATERIAL CARD 3 x 5

the f.o.b. factory value of the product. That is the amount of the total sales from which the estimated freight allowance has been deducted. The sales register should be ruled to show:

Date of sale.
Shipment number.
Name of customer.
Address.
Amount of invoice.
Freight liability.
Net credit to box account.
Number of feet shipped.
Distributing columns for the quantities of each kind of material (lumber).
Memorandum column for the notation of freight bills received.
Freight adjustment—Dr. and Cr.

From this source the information posted to the credit of box account is derived.

Without an inventory at the close of each month, of lumber, box parts, and finished product in the factory, the account is incomplete. Two forms are shown which will greatly facilitate the inventory work. The form shown in Fig. 8 is used for listing the lumber which has been charged to box account but not used, and the made-up boxes which have not been invoiced. The form in Fig. 9 is used for box

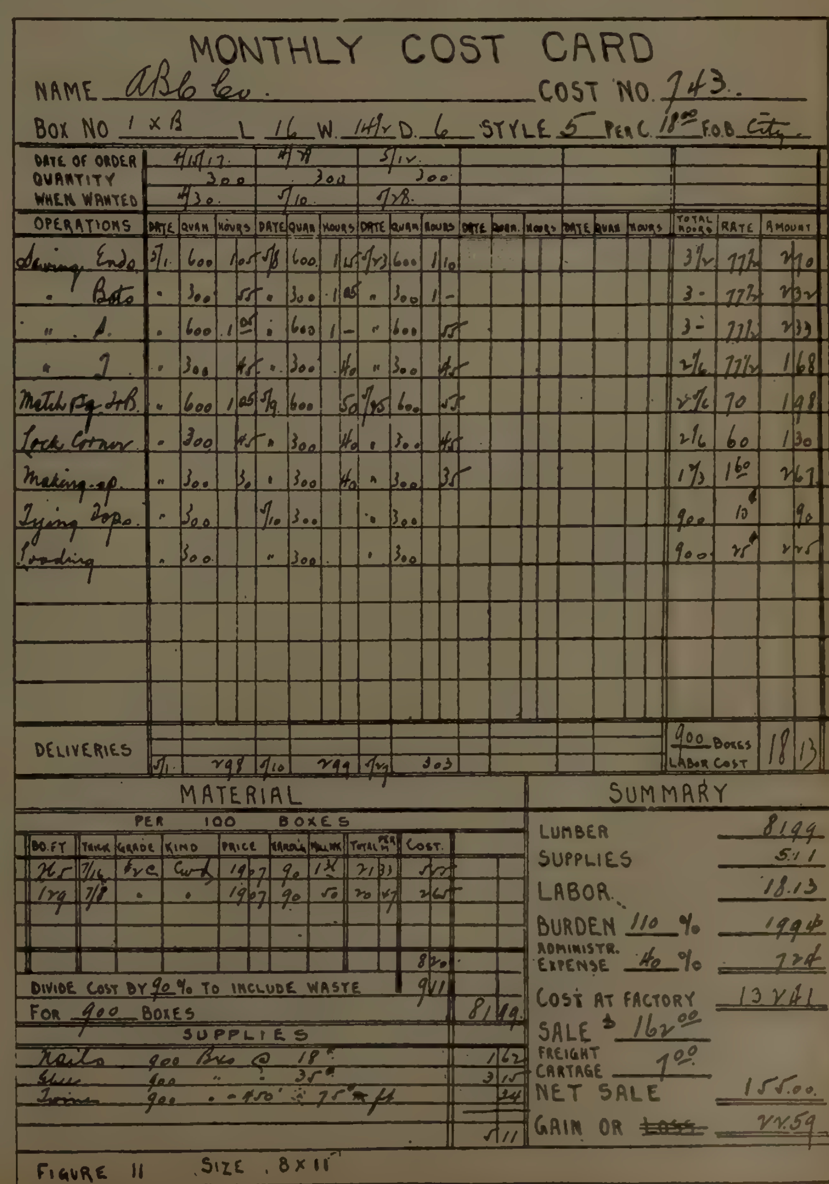


FIGURE 11 SIZE 8 x 11"

parts in the various stages of manufacture. This inventory is priced at cost.

It is believed that the form suggested for the box account and a physical inventory of work in process and finished is preferable to the keeping of separate accounts for:

Goods in process.
Finished goods.
Cost of sales.
Trading account.
Sales account.

This for the reason that the requisitioning of material of all kinds for every order is impossible, or at least impracticable, and the danger of error too great to permit the use of that method. The plan of charging material to production orders will be explained in the paragraph on job costs.

Out-Freight Account.—This account is credited at the close of each month with liability taken for freight on shipments. Entry originates in sales register. As freight bills are paid, or presented by the customer for credit, the amount is charged to this account and notation made in the memorandum column, provided on sales register for that purpose, opposite the respective item.

From time to time the difference arising between estimated and actual freight must be adjusted. Where the estimated freight exceeds the actual the difference is charged to out-freight account and credited to profit and loss. Where the actual freight is greater than the estimated the entry is reversed.

Reserve for Bad Debts.—This account is credited each month with an arbitrary reserve, against the accumulation of which uncollectable accounts may be charged from time to time. By charging profit and loss each month with a small percentage of the month's sales, probably from ¼ per cent. to ½ per cent. is ample. No single month will ever be burdened with a severe loss from this source.

Shavings and Sawdust Account.—To this account are credited the sales of this product; also the consumption thereof for fuel. This is a revenue account, and at the close of the month should be written into profit and loss.

Discounts on Purchases.—This account is credited with all discounts allowed by creditors, and at the close of the month is written into profit and loss.

The practice of useing these discounts as an offset against the cost of materials should be discouraged. Discount earned by prompt payment of bill is a form of interest. Such earning is an earning of capital, and cannot be used to diminish production cost.

Discounts on Sales.—This account is charged with all discounts allowed to customers, and at the close of the month is written into profit and loss.

This item is purely a commercial cost, and should, for that reason, be kept out of the production costs.

Sales Allowances.—To this account all allowances for shortages, breakage, and other claims made by customers are charged. The balance in this account is written into profit and loss at the close of each month.

Job Costs.—Once the plan of accounting proposed in the foregoing pages has been properly established then the matter of job costs can be undertaken with reasonable assurance that the results obtained will be fairly accurate. The records and accounts shown lead to a complete analysis of materials and other elements of cost, and it is the function of job costs to distribute these elements to the orders which constitute the product of the factory.

The job cost system, as ordinarily applied to manufacturing enterprises, contemplates a separate cost report covering each item on an order. Owing to the frequent repetition of orders for some sizes it is proposed here to make only one cost report per month for each size or specification manufactured during that period. This will greatly reduce the amount of detail involved under the other method, and at the same time places the results in such form that comparisons of manufacturing cost between several lots of the same size can be readily made.

Another feature which should be developed out of this work is the application of these figures to estimates for new work. This, however, we will dismiss from further consideration at this time, and deal with it in a separate paper at some later date.

It is probably customary in most factories to send into the plant a work order which contains all of the items ordered by the customer at one time. This greatly facilitates work in the shipping room, but does not serve the purposes of the cost department. It is therefore, necessary to assign to each specification a cost number which is to be shown on the factory order, and by which the workmen are to report the work they have performed. This cost number becomes a fixed means of identification, and is not cancelled until some change is made in the size or construction of the box.

Immediately upon the issuance of a work order one copy is turned over to the cost clerk, who makes out material card (Fig. 10). The net feet are figured in accordance with the method adopted by the National Association of Box Manufacturers, and the cards then filed in numerical order of job number, without reference to the name of the customer.

Prices of materials and grades and kinds of lumber are omitted from this card, because these are subject to frequent change. The purpose of the material card is to eliminate the necessity of figuring material for a size more than once.

At the same time monthly cost card (Fig. 11), having a corresponding number, is prepared, and all of the necessary headings are inserted. The monthly cost card is filed in the same manner as prescribed for the material card.

Monthly Cost Card

In arriving at the lumber charge applicable to any cost card the net feetage will have been entered from the permanent material card (Fig. 10), representing the size and specifications. Prices at which extensions will be made can best be obtained from the material records, as already shown. Grades and kinds of lumber are posted to the monthly cost card from the sawing report.

In the matter of supplies, it would be impracticable to attempt to compute the exact value of all nails, glue, inks, and similar items entering into each job. Certain arbitrary charges, however, can readily be arrived at, which, when applied against the job, will cover relatively the costs of these items. The value of nails entering into any order, for instance, can be computed by ascertaining the value of any one month's or, preferably, number of months' consumption, and making a division, using as a divisor the number of "nailing surfaces" made by all nailing sets for the month. The total can be ascertained in the following manner:

Ordinarily a box will have six nailing surfaces—four from the sides and two from the bottom into the ends. Lock-cornered boxes and single cleated ends would contain two nailing surfaces, while double cleated ends would have four. The number of nailing surfaces for the month would then be arrived at by taking from the nailers' production reports (Fig. 6).

Total nailed boxes multiplied by six.
Total lock corner multiplied by two.
Total single cleated ends multiplied by two.
Total double cleated ends multiplied by four.

To illustrate this method the following example is shown:

Cost of nails used during month	$439.45
Nailing done:	
63,927 boxes x 6	383,562
19,574 ends S. C. x 2	39,148
16,392 ends D. C. x 4	65,568
Total nailing surfaces	488,278

488,278/439.45

.09 per 100 nailing surfaces

Makes a cost for nails:

Per 100 nailed boxes	.54
Per 100 lock cornered boxes	.18
Per 100 pair S. C. ends	.36
Per 100 pairs D. C. ends	.72

The arbitrary rate arrived at in this way times the number of boxes in the job, would give a relative charge for nails. The ink values can be arrived at similarly by a charge per 100 impressions. Glue values, as well, should be arrived at by taking the cost of glue consumed for month, and using as the divisor in this case the total number of parts run at the lock-corner cutters, and on those matchers having a gluing attachment. The result would be cost of applying glue per 100 joints. The cost per 100 lock-cornered boxes would be that result multiplied by four, and the cost on matched boxes would be that result multiplied by the number of matched parts in the box.

As each day's production reports (5, 6, 7) are turned over to the cost clerk they are posted to the monthly cost card, against which they apply. The production reports are then recapitulated, to be used at the end of the month as a check against the total productive labor reported from pay rolls, and for such other statistics records as reference has already been made to. The extension of the productive hours, posted on each cost card, times the operation rate, will give the total productive labor value which applies against each cost card or job.

The cost card, up to this point, has been completed as to lumber, supplies, and direct labor. The additional items of factory burden and administrative expense can be best applied, as already mentioned, by means of percentages upon productive labor. The percentage which would absorb completely these burdens can be ascertained from a comparison of the total productive labor value for any one month with the overhead expense for the same months. By comparisons of these items covering a number of months, a flat percentage should be arrived at which could be used each month in adding the overhead charges.

The actual ratio of overhead to productive labor, however, will vary slightly from month to month.

In order to stabilize the cost figures, it is more satisfactory to use a percentage that is founded upon the experience of a number of months, rather than to change this rate at frequent intervals.

The total charges made on all cost cards for the month, as to lumber, supplies labor, factory burden, and administrative expense can then be drawn off.

The total of these items should then be augmented by the value of physical inventory of material, goods in process, and finished goods at the end of month, and reduced by the totals of similar inventories at the beginning of the month. The amount so arrived at constitutes the equivalent of these same elements charged into the box account. The inventories as they appear in the box account should not be used to modify the totals drawn from that source.

Should there be a considerable variation in this reconciliation, and it is determined to locate the cause of the differences, then, of course, it would be necessary to divide the two inventories into their component parts—namely, lumber, supplies, productive labor, and overhead—and to make the adjustment spoken of before with respect to each of these items individually.

The items upon the cost sheets of labor on work in process, or finished goods not billed, are not, of course, included in the current month's costs. These items will be carried over and form part of the labor cost for the following month's sales.

In the foregoing many details have been treated only superficially, for the reason that no matter what plan is proposed it would be subject to some modification to the local conditions in each plant.

The purpose of these suggestions will have been fulfilled if the general idea has been conveyed as to how the several elements of cost are to be displayed upon the general books and the basis for their distribution to the job has been shown.

Retailers Becoming Extensive Advertisers

"The retail lumber dealers of the United States are spending at least $700,000 yearly for advertising in their local papers," said R. B. Goodman, acting president of the National Lumber Manufacturers' Association, recently in an address at the annual meeting of the National Retail Lumber Dealers' Asociation. Mr. Goodman stated that at least 50 per cent. of the total lumber cut of the United States passes through the hands of the retail dealers, and that the service performed by the retailers through buying in carload quantities the great variety of special items, from shingles to interior finish, that must be assembled for a single building, together with their expert knowledge of materials, enables them to sell to the home-builder more cheaply than it would be possible for the sawmill men to do. The retailer carries in stock everything that is needed, and, if anything goes wrong, the buyer does not have to write letters about it. Matters are settled face to face. Mr. Goodman also spoke of the organizations of lumber manufacturers which have established definite and reliable standards of product, and of co-operation between the manufacturers and retailers in service to the public through the furnishing of plans for all kinds of buildings, assistance in advertising, and the dissemination of information upon the proper uses of the different kinds of lumber, of information upon the use of creosote to prolong the life of timber, fire resistant paints, and automatic sprinklers to reduce the fire hazard, and special uses, such as wood block pavement, hardwood flooring, etc., that have been developed as the result of the better merchandising of the product.

In referring to the unusual conditions brought about by the war, under which the entire lumber industry is now operating, he said: "This crisis has made, and will continue to make, enormous demands upon our industry. This situation demands of us more efficient organization in our industry to meet these demands. It is not only a matter of economic wisdom for the individual lumber dealer or the individual manufacturer to loyally support his trade association, but to do so has become a patriotic duty."

A Chat with a Live Dealer

With the dawn of the European turmoil the wheels of commerce slackened. The call to arms threatened to strangle industry.

The prophets in every city and hamlet of America were heard and the pages of the newspapers thrown open for their opinions. Through the trenchant pens of these gentlemen we learned of the starvation to come, the bankruptcies to follow, and the inevitable upheaval of the business world.

To-day France and England are manufacturing more merchandise than ever before in their history. They suffered changed conditions, readjusted themselves, and then acted.

War has not injured the growth of trade in general. That it has checked the development of certain unnecessary or menacing industries goes without saying. It has only changed conditions without swerving capital from its advantageous channels. Most people have mistaken these changed conditions for "dull times."

The progressive dealer has a more prominent backbone than a wishbone. He was not slow to see that as the French and English recovered from their shock so have we regained our former prosperity.

The hustler on catching a glimpse of the tail feathers of an opportunity chases it, gets a strangle-hold and makes it disgorge cash. If conditions change, he changes by going up a rung instead of setting the ladder aside for another day.

We should keep before use the lesson taught by the French and English. When things were altered they were met with new or modified method.—From "Doubling Your Winter Profits," issued by Morgan Sash and Door Company.

Lumber Company Uses Novel Advertising

The Smith-Robinson Lumber Company, Bemidji, Minn., not only believes in using very liberal advertising space in its local papers, but also in selling a completed house bill for a certain specified sum—that is, an entire ad. will be written regarding one house and a number of illustrations will show details of interest to prospective builders, all the building material for which will be sold for a definite amount. For example, one ad. that has met with much success shows a two-storey bungalow type of building. In the upper left-hand corner an illustration is shown of the completed house; in the upper right-hand corner another illustration shows the dining-room and part of the living-room, and forces home in a telling manner the charming effects to be obtained by the proper use of millwork for interior finishing. Just between these two illustrations appears the statement that the company will furnish "all the material for this home, including lumber, lath, shingles, windows, doors, casing, plaster, and woodwork throughout the interior, for $1,888.33, and you can inspect our grades." In addition, the company furnishes plans from which the house is to be built. Below the two large illustrations smaller ones are run, showing a floor plan of the lower floor and also one of the upper floor, while in the centre appears an illustration of a built-in kitchen cupboard that is sure to attract the attention of the housewife. The reading matter is given over, throughout, to describing the good points of the various rooms, as well as the sort and kind of lumber suitable for securing the best effects and, at the same time, making the best house. After carefully reading such an advertisement the prospective home-builder can hardly fail to feel as though the house had actually been inspected in person, and, unquestionably, the desire to own just such a home will be greatly stimulated.

Retailers' Advertising Creates Demand

Retail umbermen in Birmingham, Ala., have just discovered, after a campaign filled with interesting incident, that advertising creates a demand for lumber, just as properly displayed printed matter helps the department store man or the shoe dealer, says the American Lumberman. The Estes Lumber Company, one of the largest retail yards in the city, was the first concern that broke into print with retail lumber advertising. Since that time, during the last two months, many other concerns have adopted the policy, and the newspapers, billboards, and street cars have been ablaze with the tasty, "different" brand of ads that create a longing for home ownership and increase the zest for home-building.

"People do not care so much about the price per thousand feet for No. 1 common flooring as they do the eventual cost of a well-described little bungalow," said Mr. Estes, in telling of his plan. "I conceived the idea that the desire for lumber could be created by appealing to the home-building instinct, and now the lumber dealers who first thought I was wasting a lot of money by advertising are thoroughly converted to the idea. It has been amply demonstrated that publicity pays just as well in this business as in any other."

Most of the big retail yards are out in the suburbs, where space is not at a premium, and this isolation makes selling the customers difficult. To eliminate this disadvantage dealers have opened down-town showrooms that have been pronounced great novelties by visiting lumbermen. Offices in skyscrapers and front windows down town have been utilized in this way. Complete model houses are shown, with plans furnished free to buyers of the lumber, and instead of specializing on the cost per thousand feet, the house complete is shown and the lump cost entire is quoted. This has proved the most satisfactory method ever adopted by the local retailers, and all are pleased with the results.

U. S. National Retailers' Meeting

The National Retail Lumber Dealers' Association of the United States held its first annual convention at Chicago on September 7, and there were about 200 delegates in attendance. The secretary reported that the association had made gratifying progress and that the present membership included 287 firms. A number of excellent addresses were delivered by the officers of the association and by several of its members. Some of these addresses have been published in the Canada Lumberman of September 15 and in the present issue.

The Schroeder Company's Operations in Ontario

In the Canada Lumberman of September 15 a short reference to the logging operations in Ontario of the Schroeder Mills and Timber Company was published. In a letter from the company's head office at Milwaukee, Wis., they gave an interesting outline of their camp operations, from which we are able to publish a more complete description. The company is putting in six or seven camps along the Pickerel waters, and is planning to have them as commodious as possible. While modestly disclaiming an intention of making these model camps, the company is introducing features which will go far towards making the employees know that they are in good quarters where it will be wise to stay.

"Besides an earnest desire to make our employees as comfortable as is possible, considering the nature of the job," they say, "we also have in mind the fact that the best way to attract labor now, when it is so scarce, is to pay the men well, feed them and house them well. Accordingly we are making the sleeping quarters roomy, with plenty of light and ventilation, and as sanitary as vigilance can produce. Double-deck iron spring beds are being furnished, with regularly washed bed clothing. Separate rooms are provided for washing and dressing.

"Each camp will have a separate building, one half of which is designed for a bathhouse, while the other half will be a sort of lounging and reading-room, where literary pursuits can be enjoyed, and where the men can do their letter-writing in the evenings, undisturbed by the general conversation in the men's camp. All the camps will be laid out along the same general lines, and each will accommodate about 125 men.

"We expect to take out about 25,000,000 feet of pine this year, most of which will be driven to Georgian Bay by way of the Pickerel and French Rivers.

"Lauder, Spears & Howland, whose headquarters were formerly at Mowat, on the Canadian Northern, have joined us in the construction of the Key Valley Railway, which will connect the C.P.R. at Pakesley Station, five or six miles south of the Pickerel River, with the Lost Channel, a bay on Kawigamog Lake, through which the Pickerel River flows. This railroad will be about 10½ miles long, and is standard gauge built, with 50-pound rails. The Schroeder Mills and Timber Company will use this road for transportation of men and supplies to its camps, while Lauder, Spears & Howland will use the road in a small way for the same purpose, but principally to deliver to the C.P.R. at Pakesley the lumber which will be cut at their new mill, located at the westerly end of the Lost Channel. The railroad will, no doubt, be very attractive for the men, as by travelling over it they can reach our camps without tramping many miles through rough and muddy bush roads.

"We have moved our headquarters from Salines, on the Canadian Northern, to Pakesley, on the C.P.R., and have built very commodious buildings at that place. As the job will last six or seven years, we have endeavored to make the headquarters buildings and grounds quite attractive and well suited to the purpose for which they were designed.

"Our Ontario operations are in charge of Mr. James Ludgate, of Parry Sound, general manager, and James Ruxton, assistant manager.

"We are an American firm doing business in Ontario. Every man on the job is a Canadian—in fact, this has been the case ever since we started business there four years ago. We are delighted with our venture. The Canadians have treated us splendidly, and have shown so much good-will that we have a very warm feeling for them."

Oppose More Frequent Pay for Loggers

A deputation representing the sawmill operators has presented to the British Columbia Government a protest against the legislation passed at last session of the legislature establishing the semi-monthly pay-day in all industries employing labor in British Columbia. The deputation was to have been augmented by one from the loggers' association, but the latter, through a misunderstanding as to the date, failed to appear. During the discussion it was urged by E. J. Palmer, of Chemainus, that the logging companies now lost possibly four days at each monthly paying-off because of the bibulous inclinations of the loggers, and that a semi-monthly payday means eight days lost each month. He declared that he spoke from forty years' knowledge of the logger and his habits, and that the best thing that could happen to him would be some system whereby he would handle no money at all. J. D. McCormick of the Fraser River Mills, employing about 1,500 men, said that his company never has a pay-day without trouble, as a large proportion of the crew lays off at these times and imbibes freely. In his opinion two additional pay-days each month would mean more accidents, the records showing that 90 per cent. of the accidents in a logging camp occur immediately after pay-day.

The act requiring a semi-monthly pay-day throughout British Columbia becomes effective Oct. 1. As Canadian federal regulations require that employees must be paid in legal tender, thus precluding the use of checks, it means that large amounts of cash must be provided twice a month, which naturally involves considerable risk and inconvenience, especially in the logging industry, where hundreds of men are employed at long distances from any bank. No objection was urged to the semi-monthly pay-day as regards employees of mills, but in the loggings camps, it was strongly urged, the peculiar conditions require special treatment. The deputation representing the sawmill operators consisted of J. D. McCormick, H. H. Alexander, E. W. Hamber, E. J. Palmer, and J. W. Hackett.

The Shooting Season

"Conservation," in its September issue, says:

"September ushers in the shooting season, with the accompanying dangers from the presence of hunters in the woods. The sportsman is usually a smoker, often careless with matches and sparks from his pipe.

"This year, owing to the long dry spell, the wooded areas are especially inflammable. The least spark may be the cause of a conflagration, the result of which cannot be estimated.

"An appeal is made to sportsmen to be careful with fire, to refrain from smoking while in the woods, or, if this is impossible, to make sure that all matches are thoroughly extinguished and that live sparks do not fall on the dry leaves or grass.

"If camp-fires are necessary, guard them, and, when no longer required, extinguish them. Tramping out a fire is not positive; fires frequently follow dry roots into accumulations of dry material, only to break out again when fanned by a high wind.

"The destruction of the forest means also the destruction of the game and wild life therein, and it is therefore in the interests of the sportsmen, if for selfish reasons only, to be careful with fire."

Logging at the Top of the Big Smokies

We find on the northern slope of the Big Smoky Mountains that the stand of timber, as you get near the top of the ridge, becomes very light and of a very poor grade of hemlock; and, due to the fact that railroad building is a very expensive item, it is some problem to figure out how to get these logs without going to more of an expense than they are worth, says an article in "Logging." The Elkmont Contracting and Supply Company have worked out a very unique scheme whereby they are logging the long hollows which head out near the top of Clingman's Dome, and, by using a combination of different types of equipment, they have been able to do this work in a very satisfactory manner. The grades in these hollows range all the way from 15 to 30 per cent., and they have built a light incline of 36 in. gauge, using light tram cars which will handle about 1,500 feet to the car, pull these cars up the incline and let same down by means of a light incline machine, consisting of a hoisting engine with a drum so designed as to handle a sufficient capacity of rope, and equipped with a sufficient braking capacity to let these loads down with safety. In connection with this they have rigged up a small hoisting engine with a gravity swing loading boom for loading these cars, and it is their intention to use a light cable-way outfit to log out the slopes of these hollows, where the timber stands in sufficient number of feet per acre to warrant this class of work. In connection with this they are using teams to pick up the scattering logs. This equipment is operated by about twelve men, aside from the cutting and grading crews. They

feel at present that this system will be used with considerable advantage, due to the great shortage in labor in this section at this time.

At the foot of these inclines the logs are transferred to their standard gauge equipment by their regular loading equipment, consisting of the full swing type loader. The results obtained from this operation have been more than satisfactory—in fact, they are doing more than they expected with this outfit.

The Greater Cost of Handling Small Timber

Recent United States Forest Service investigations have disclosed some figures as a result of close studies of the cost of manufacturing lumber from large and from small timber that are unusually interesting. The tabulations presented show that the time required to skid 1,000 board feet in 16 ft. logs of 8 in. average diameter, small end, was 55 minutes; 14 in. logs, 28 minutes; 20 in. logs, 19 minutes. The logging time per 1,000 board feet was 29 minutes for 10 in. logs, 13 minutes for 14 in. logs, 6.6 minutes for 21 in. logs. A band sawmill operating upon oak had a daily capacity of 12,000 feet on logs 8 in. in diameter, while on logs 14 inches in diameter the same mill had a daily capacity of 30,000 feet; and the graphic curves were much the same for the band mill cutting in pine, although the curves were not so pronounced for two mills operating in poplar and chestnut intermingled with pine. The difference in sawing capacity was also not so marked as between large and small logs in the case of two circular mills, one working upon pine and the other upon hardwood.

Loggers Shun the Flowing Bowl

About fifty lumberjacks who have been fighting forest fires in Idaho were recently asked to go into Montana on similar work, but declined because they feared the effects of emigrating to a "wet" state after having spent many months in the "dry" states of Washington and Idaho. They admitted that they were likely to submit to temptation and burn their money for booze if they came into close contact with it, and they preferred to keep away from the danger.

Canadian Markets in South Africa

Better Demand for Deals—Douglas Fir Trade Requires Special Methods to Overcome Local Trade Customs—Three Years' Import Statistics

The Canadian trade commissioner at Cape Town, South Africa, in a recent report, states that owing to restriction on regular shipments and an extra demand for Douglas fir, many special efforts have been put forth to secure wood of all kinds from Canada. The ocean freight conditions prevented advantage being taken of the opportunity. It is, however, satisfactory to report that Canadian deals are and will be in better demand, and that the first sample lot of special quality Douglas fir lumber tested by the South African Government railways has proved so satisfactory that a repeat open order has been placed and tenders issued making demand for big quantities.

The handicap to Douglas fir seems to be an inclination on the part of the regular importers to avoid dealing in the special grades of Douglas fir, due to the fact that profits are liable to be more limited than they are on a cargo of, say, merchantable, the Canadian shipments of which are such an average high grade that the dealer here has been accustomed to make his own grades, and often the bigger percentage of a cargo has been sold as a mark above merchantable, while the inferior part of the shipment has been sold at good profit as merchantable.

These conditions the British Columbia trade will have to meet in some way, such as stocking in South Africa, or representation, which will have the effect of forcing regular dealers to handle "railroad quality" and others in the lumber, and will be helpful in introducing shingles, doors, windows, shooks, staves, and every other line which can be manufactured in Canada from the British Columbia woods. As far as I can learn, only one South African firm has made any effort to quote on Canadian timber tenders as submitted by the South African railways.

In lumber, rough or planed, Canada's 1915 shipments to South Africa were 1,254,212 cubic feet, valued at $271,300, and in 1916 the value was $254,300 for 960,543 cubic feet.

Flooring and Ceiling—Imports

Flooring and ceiling imports during recent years have been as follows:

Year.	Total for the Union.	Canada.	United States.	United Kingd'm.	Sweden.	Norway.
1913	$1,229,000	$13,000	$20,700	.....	$867,000	$313,000
1915	365,000	15,400	6,500	.....	168,500	173,800
1916	668,600	8,500	4,500	420	329,000	319,400

Sweden's shipments in 1916 were 587,525 cubic feet, compared with 2,830,614 cubic feet in 1913. Norway was able, with Sweden, to ship through the danger zone about the same quantity in 1916, delivering in South Africa 571,407 cubic feet. Norway's 1913 shipments were 1,026,397 cubic feet.

These countries score because they are able to ship to standard grades, and have plenty of low grade for shipment.

Russia's best year of export in this line was 1913, when she shipped 39,421 cubic feet, at a value of $10,600.

Imports of wood, planed and grooved (other than flooring and ceiling), were as follows:

Year.	Total for the Union.	Canada.	United States.	United Kingd'm.	Sweden.	Russia.
1913	$145,000	$57,800	$59,800	$3,100	$15,200	$3,900
1915	58,600	14,600	32,000	490	9,200	105
1916	61,000	28,700	27,300	175	1,450	95

If the above table is coupled with the flooring and ceiling imports it will be seen that on both entries Canada made good headway over 1915 in value, but in comparison with 1913 there is a big drop, all due to restricted ocean freight. Norway and Japan shipped small quantities under this heading in 1916.

Pine, Unmanufactured—Imports

Imports of unmanufactured pine were valued as follows:

Year.	Total for the Union.	Canada.	United States.	United Kingd'm.	Sweden.	Norway.	Russia.
1913 .	$2,518,000	$151,000	$521,000	$170	$1,254,000	$503,00	$75,800
1915 .	1,129,000	148,000	240,800	5	593,000	159,000	30,600
1916 .	2,802,000	110,400	258,000	..	1,305,000	190,000	213,200

Canada's figure of trade under this heading dropped from $352,000 in 1910 to $145,000 in 1912, and an advance was made in 1913 to $151,000, followed by another increase in 1914 to $196,000, and again a decrease during the past two years, due to limited ocean tonnage for lumber.

In normal times there is an additional market to the above table, as the South African Government stores purchases average each year about $229,000.

Imports of wood and timber, unmanufactured, N.O.D. (all except oak, pine, poplar, planed and grooved), were as follows:

Year.	Total for the Union.	Canada.	United States.	United Kingd'm.	Australia.	Russia.
1913	$290,000	$50,000	$52,300	$4,800	$81,000	$67,800
1915	176,700	85,800	33,400	1,350	53,700	2,300
1916	163,700	80,500	36,000	3,200	36,000	.....

The total imports in 1913 under this heading were 1,098,684 cubic feet, which dropped to 487,469 cubic feet in 1915 and 396,800 cubic feet in 1916. Canada's trade under this heading continued to improve, and will do so in the future, as the South African box shook manufacturers are using more of the Canadian spruce deals for their plant. Quality of and improvement in regularity of cut is the factor which makes the Canadian deal popular. If our Canadian box shook manufacturers were to adopt machinery as used in Sweden, they would then be in a position to compete in box shooks, which would be to Canada's advantage. Poplar imports in normal times average about 90,000 cubic feet, and Canada has shipped occasionally small quantities. More of this wood should come from Canada; it is used as a shelving and by the cart and carriage manufacturers in South Africa.

Box Shooks—Imports

Imports of box shooks were valued as follows:

Year.	Total for the Union.	Canada.	United States.	United Kingd'm.	Sweden.	Norway.
1913	$452,000	$ 345	$ 4,600	$68,100	$313,000	$50,500
1915	510,000	8,700	2,100	36,500	415,700	39,100
1916	919,000	9,000	8,500	56,000	777,000	57,500

During the past two years some headway has been made, and some sample orders have been placed with British Columbia manufacturers. Sweden with machinery that uses up all waste wood in this industry, has controlled the trade, and, with Canada's supply of raw material, it only requires up-to-date methods to secure a valuable trade which is going to be very much larger owing to the immense development of the fruit and other South African industries.

Many trade enquiries have been submitted, without any real results as yet, but there is every hope that, with fair shipping conditions from the Pacific, British Columbia will secure a good share of this trade.

Eastern Canada should also make an effort in this article, as it is a permanent and growing demand.

The city of Cleveland, Ohio, is very short of houses, particularly those required by the working people, and a plan is being worked out for the creation of a stock company comprising many manufacturers of Cleveland for the building of workmen's homes. All the houses will be constructed of wood, with concrete and brick trim. None is expected to cost more than $4,000, including the cost of the lot. Rentals will be in the neighborhood of $20 per month, and attractive terms will be made to encourage workmen to purchase their houses.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) $2.10 per inch, each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted—Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Maple Squares Wanted

Wanted to purchase for export in 1918 one million feet Maple Squares: 1¼ in., 1½ in., 1¾ in., 2¼ in., 2½ in.; lengths, 12 in., 18 in., 24 in., 30 in., 36 in., 42 in., 48 in.

State price air-dried and bundled f.o.b. cars. State shipping point. Box 625, Canada Lumberman, Toronto, Ont. 18-21

For Sale—Lumber

For Sale

A limited number of cedar Telephone Poles, 25 ft. to 35 ft. long. Also a few cars 8 ft. cedar fence posts, 4½ in. and up at top. For particulars apply Lynch & Ryan Lumber Co., Marmora, Ont. 18-21

For Sale

Can make prompt rail or boat delivery of from 3,000 to 5,000 pieces of Jack Pine Piling, from 40 ft. to 70 ft. long.

The New Ontario Timber & Trading Co.,
17-20 Sault Ste. Marie, Ont.

Lumber For Sale

300,000 ft. B.M. 1 x 4 and up Clear and No. 1 Spruce.
400,000 ft. B.M. 2 x 4 to 2 x 10 Spruce.
Piled widths and lengths separate.

GEO. C. GOODFELLOW,
c Montreal, Que.

Hardwoods For Sale

1½ in. and 2 in. Hickory and 1 in. and 1½ in. Plain White Oak, 1st and 2nd. Also several cars of Birch and Whitewood or Poplar. All dry. Also 2 in. merchantable and Crating Spruce.

J. P. ABEL, FORTIN & CO.,
19-19 Maisonneuve—Montreal.

For Sale—Machinery

Machinery For Sale

One 36 in. planer, roll feed, with countershaft.

One Jackson & Cochrane 24 in. planer, roll feed, with countershaft.

One 36 in. two drum sander, Cowan & Co.

R. W. NICHOLSON,
18-21 Strathroy, Ont.

For Sale at Smith's Mills, Que.

1 40 in. Crocker Turbine Water Wheel.
1 75 h.p. Corliss Engine.
1 Clapboard Machine.
1 Waterous Lath Machine.
For price and particulars write

THE VALLEY LUMBER CO.,
19-20 Smith's Mills, Que.

Machinery For Sale

1 Goldie & McCulloch Engine, 16 in. x 38 in. Complete with Heater, Pipes, Oil Pump, etc. In first-class condition.
1 Holmes Matcher.
1 Band Rip Saw.
1 Dynamo Engine, Jewel No. 3.

R. Laidlaw & Co., 65 Yonge Street, Toronto. 19-23

Machinery For Sale

A Light Planer, Matcher and Moulder.
12 in. 4-side Moulder.
Power Feed Rip Saw.
Trim Saw. 12 in. Jointer.
Dry Kiln. Lighting Plant.

A. J. LINDSAY,
94 Pembroke Street,
17-20 Toronto, Ont.

For Sale

No. 5 Double Bale, Geared Screw, Power Shaving Baling Press, manufactured by the P. K. Dederick Sons, Albany, N.Y.

Capacity two bales, about 30 in. x 16 in. x 16 in., weighing approximately ninety pounds each per stroke of machine.

This machine has been in use but five or six months and is in first class condition.

It will be sold at a bargain.

THE DE LAVAL CO., LTD.,
19-22 Peterborough, Ont.

Circular Saws

1 70-in. Circular Saw, 5 and 6 gauge, 2 in. hole, 90 teeth.
1 72 in. Circular Saw, 5 and 6 gauge, 2¼ in. hole, 90 teeth.

Could make alterations in hole, hand or speed to suit. These saws would cost new today $300 each, but we are willing to accept any reasonable offer. Anyone that can use them can secure a bargain.

The James Robertson Co., Limited,
19-19 Toronto, Ont.

Wanted—Machinery

Boiler Wanted

300 H.P. Heinie Water Tube Boiler, 3½ in. Tubes, 18 ft. long or less, second-hand equipment in good condition. Oliver Chilled Plow Works of Canada, Limited, Hamilton, Ontario. 19-19

Refuse Burner Wanted

Second-hand Refuse Burner in good condition, 12 to 15 feet in diameter, and moderate height. Address with full particulars and price.

REAMSBOTTOM & EDWARDS,
19-19 Connaught Station, Ontario.

Wanted—Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

WANTED POSITION as trimmer man, air lift; five years' experience mill cutting, 150 M. daily. Address Z. T. Harlow, Crossburn, Nova Scotia. 18-21

YOUNG MAN, six years' experience as stenographer and bookkeeper in lumber business, desires change. Best of references. Box 629, Canada Lumberman, Toronto, Ont. 19-2

WANTED POSITION AS BUYER for good lumber firm in States or Canada. Have over 12 years' lumber experience. Box 23, Canada Lumberman, 119 Board of Trade, Montreal, Que. 18-19

EXPERIENCED LUMBERMAN with good selling connection in Montreal and vicinity, is desirous of establishing a connection with a reliable lumber manufacturing firm in Spruce and Pine on a commission basis. Highest reference. Box 623, Canada Lumberman, Toronto, Ont. 18-19

POSITION WANTED—As Manager or Office Manager with lumber and woodworking business. Twenty years' practical experience in all departments, including lumber factory and office routine. 15 years with one large Ontario company. Have always made good; best credentials. Now engaged. Apply Box 624, Canada Lumberman, Toronto, Ont. 18-19

COST ACCOUNTANT, ineligible for Overseas Service, having had four years' experience in Mill Work Costs, and an additional three years as an assistant with one of the foremost Accounting firms of Canada, desires a position where he can control and operate the cost accounts of a large woodworking and contracting concern. Good references. Mr. Howe, 1401 Royal Bank Bldg., Toronto. 19-20

Business Chances

Sawmill For Sale

Complete Sawmill for sale, cheap and easy terms. Capacity 20,000 feet per day. Field Lumber Company, Limited, Field, Ont. 11-t.f.

Saw Mill For Sale

Complete Sawmill with timber rights and freehold lands for sale. excellent shipping facilities. Mill situated County of Shefford, with a visible supply of soft wood and hard wood timber in the neighborhood for an extended life. Address P. O. Box 222, Waterloo, Quebec. 16-t.f.

For Sale

Timber Limits and Sawmill, estimated fifteen million feet of hardwood and ten million feet soft woods. Sawmill capacity 25 M. feet, shingle mill 125 M. Docks, tug, booms, logging outfit, houses, etc. Price $35,000.

The Manitoulin Lumber Co., Ltd.,
11-22 Walkerville, Ont

Jobbers Wanted

We wish to let several contracts to take out logs on Berth No. 6, being broken front lying between the Magnetawan and French Rivers. This berth is all convenient to Canadian Northern Railway.

John Harrison & Sons Company, Limited,
Saw and Planing Mills,
9-t.f. Owen Sound, Ont.

Timber Limits and Saw Mill For Sale

Five and one-half miles of Crown Timber Lands, containing approximately 10,000,000 ft of Hardwood and Spruce Timber, situated on the Laurentian Branch of the C. P. R. Exceptional opportunity for anyone who is in the manufacturing trade.

CARDINAL & PAGE,
180 St. James Street,
19-19 Montreal, Canada.

Mill Plant and Limits For Sale

43 Miles Limits on 31 Mile Lake, Gatineau Valley, containing Basswood, Spruce, Fir, Pine, Cedar, Birch, Maple and Pulpwood.

New Waterous 8 ft. Improved Double Cut Band Mill complete. Steam Alligator, Boats, Sleighs, Wagons, Harness, etc. For further particulars apply to

A. W. STEVENSON,
P. O. Box 2624,
8-t.f. Montreal, Que.

For Sale

About five or six tons of ⅝ and 9/16 tested chain in lengths from 27 ft. to 30 ft. with ring on one end and hook on the other end.

Address Drawer "F," Sarnia, Ont. 19-t.f.

Wanted

Sawmilling and logging contractors to manufacture 100 acres of timber near Guelph. Two miles from railway. Operations to start in two weeks. Apply H. G. Cockburn & Son, Guelph. 19-19

Sawmill For Sale

Saw, Shingle and Planing Mill in Bayfield, on Lake Huron, will be sold at a bargain. Practically new and cost over $6,000, and will be sacrificed for $4,500 on easy terms. Plenty of available timber for this mill which will make more money than the best 100 acre farm in Huron County.

This is a gold mine for the enterprising man with small capital. Apply to

JNO. B. MUSTARD,
19-22 Brucefield, Ont.

Valuable Water Power

and 162 Square Miles of

Valuable Timber Limits

FOR SALE BY PUBLIC AUCTION

The limits are on the river, Mississippi Branch, a tributary of the Madawaska, and Water Power at Eganville, Ont., on the Bonnechere River. These will be offered for sale by Chas. M. Henderson & Co., Auctioneers, at their office, 128 King St. East, Toronto, Ont., on **October 30th, 1917, at 2 o'clock** p.m. The Limits will be offered in three parcels, as follows:

Parcel No. 1—
Comprising parts of the Townships of Mayo, Carlow, and Raglan, license covers in all 65 square miles, a great portion of which is deeded or located lands.

Parcel No. 2—
Comprising two parts of the Township of Cashel in two licenses, covering 18½ square miles, well timbered.

Parcel No. 3—
Comprising parts of the Townships of Ashby and Effingham in all 78½ square miles; well timbered. This parcel also includes lots 29 and 30, Con. 10, Mayo, making 100 acres (more or less), on which is located a valuable water power, known as the Big Chute, situated five miles from the terminal of the Bessemer & Barrys Bay Railway.

All this country was cut over some years ago for the pine, of which there is considerable left, along with large quantities of Birch, Maple, Ash, Elm, Hemlock, Cedar, Spruce, Balsam, and Basswood, suitable for sawlogs, also pulp wood, railway ties, and large quantities of hardwoods for chemical purposes and a great growth of young pine.

These limits are close to the Central Ontario Ry. on the West, a branch line of which runs in the Childs Iron Mine in the Township of Mayo, from L'Mable Station. They are also easily accessable from Barrys Bay, on the Grand Trunk Railway.

The Sale will be subject to all conditions and regulations of the Department of Lands, Forests & Mines, affecting same. The licenses permit the cutting of all kinds of timber, except on deeded or located land.

The reason for selling is for the purpose of closing up an Estate.

Terms of sale regarding limits, 25 per cent. of purchase money down, 25 per cent. 1st of July, 1918, balance 1st of July, 1919, bearing interest at 6 per cent. per annum. A liberal discount can be arranged for cash. Transfer of license will be made on final payment, purchaser bearing cost of transfer.

There will also be offered for sale a valuable Water Power, with a cement dam, and the stone walls of a flour mill; the latter was burned in 1911. This is in the centre of a thriving village served by the C. P. R. and G. T. R. Railways, a good manufacturing site.

Terms for the Water Power: 25 per cent. cash on day of sale, balance can be arranged.

Any further information regarding these properties will be furnished by writing the undersigned.

The properties are offered for sale subject to a reserve bid.

GEORGE B. FERGUSON,
Renfrew, Ont.
August 30th, 1917. 18-20

AUCTION SALE OF TIMBER BERTH.

THERE will be offered for sale by public auction at an upset price to be made known at the time of sale, at the office of the Indian Agent at Kenora, Ont., on the third day of October, 1917, at the hour of three in the afternoon, the merchantable pine, spruce, cedar, tamarack and balsam fir of ten inches and over in diameter eighteen inches from the ground, growing on the Indian Reserve No. 35 C situated at Assabaska or Sabaskong Bay in the Lake of the Woods, near the town of Kenora, Ont.

In addition to bonus, the purchaser shall pay Crown dues under sworn returns furnished by a licensed culler, as follows:—

Pine	$2.50	per M. ft.	B.M. or	$25.00	per M.	cu. ft.
Spruce	1.25	"	"	12.00	"	
Cedar	1.50	"	"	15.00	"	
Tamarack	1.50	"	"	15.00	"	
Balsam	.80	"	"			

All logs over eighteen feet in length to be scaled under the cubic foot standard.

The berth will be offered at a bonus, ten per cent. of which shall be paid at the time of sale, forty per cent. within thirty days and the balance or fifty per cent. within one year from the date of sale, and satisfactory security must be provided for payment of the outstanding balance.

A license will be granted to the purchaser, and the timber must be removed under regulations of the Departmnt, a copy of which may be secured upon application to the undersigned or to the Indian Agent at Kenora, Ont.

Ten years will be allowed for the removal of the timber from the Reserve and the license will be renewed yearly for this period upon compliance with all the conditions thereof and upon payment of the usual renewal fee and ground rent.

Half of the cost of adequate fire guardianship will be a charge against the licensee, and the safe disposal of brush, tree-tops and other debris resulting from the lumbering operations must be arranged for under the supervision of the Department.

Any further information may be obtained on application to the undersigned or to R. S. McKenzie, Indian Agent, Kenora, Ont.

The unauthorized publication of this advertisement will not be paid for.

DUNCAN C. SCOTT,
Deputy Superintendent of Indian Affairs.

Department of Indian Affairs,
Ottawa, August 22, 1917. 19-19

Timber For Sale

Standing Mixed Timber estimated at 280 acres, for sale in St. Etienne de Bolton, near Bolton Centre. The Canadian Last Block Company, Limited, 135 Carriere St., Montreal. 18-19

Tide-Water Stumpage
For Sale or Exchange

For sale, or will exchange for good ranch or farm land, B. C. Tide-water stumpage, cruised and surveyed.

CARL BLOCK,
19-t.f. Peoria, Illinois.

Contract Wanted

Party can deliver two million feet of timber on C. P. R., in the course of next winter, same quantity for five years or more; three-quarters Birch, balance Maple, Basswood, Spruce and Hemlock. Knows the lumber trade and is efficient organizer. What is needed is finance, and no fair contract will be overlooked. Box 627, Canada Lumberman, Toronto, Ont. 19-19

Why Mahogany Is Costly

Mahogany timber primarily is no more highly valued in its native country than many of our own familiar woods. The things which make mahogany costly to the consumer in this country are the difficulties encountered in locating, cutting, and bringing the timber to market.

Some of these cost items are set forth in detail in a recent consular report on mahogany production in Guatemala. This report says it costs $12 per 1,000 feet to load mahogany logs on ships. There is a cost of $15 for railway transportation, and the ocean freight, which we generally figure low, runs from $15 to $20 per 1,000 feet.

These items of cost tell their own stories of the difficulties encountered in railway transportation and loading. Twelve dollars per 1,000 feet for loading logs on shipboard would sound like a hold-up price in this country, but this loading is done in localities where labor-saving devices are scarce and many difficulties are encountered.

It is pretty much the same story in the matter of railway hauling. Most of the timber is no more than twenty-five miles from the coast, yet often there is a railway charge involved running up to $15 per 1,000 feet. The ocean-going freight is uncommonly high at the present time, but the other items of cost are not unusual, and they serve to illustrate graphically why it is mahogany timber is high by the time it reaches the consumer. Perhaps some day we shall be able to introduce more modern methods, and cut down some of these items of cost. Meantime, however, other items involving increased expense will likely accrue, such as having to go further into forests after the timber.

Remarkable Redwood Burl

Rodney Burns, manager of the Stump House of the California Redwood Burl Company at Eureka, Cal., has secured one of the most interesting curiosities to be found in any part of the world. A redwood burl nine feet in diameter and weighing nearly seven tons has been brought in from the logging woods near Metropolitan, and is now on exhibition at the Stump House, corner of Broadway and Clark Streets, where it may be seen at any time. In a few weeks the novelty, unusual even for the home of the redwoods, will be shipped to the Emporium, San Francisco, where it will be placed on exhibition for a time. Later it will be sent to Los Angeles, and, after exhibition there, will be sent to other large cities of the United States. Portions of the big sphere will be polished in order that inspection will show the texture of the burl and the high polish it takes.

Why nature took it into her head to build a sphere of almost granite-like wood around a redwood tree, doing her extraordinary work 150 feet above the ground, scientists have been unable to explain. However, she accumulated nearly seven tons of hard and flinty elements, and when, subsequently, the soft portions of the tree were burned away the big sphere was left with a hole some thirty inches in diameter through its centre.

It is doubtful if this curious formation could be duplicated anywhere in the world. Nature does not play the same prank twice, and what she has done this time is well worth seeing.

Hollow Concrete Poles

A somewhat curious new process has been put into practical use in this country in the manufacture of hollow concrete poles. Wet concrete is put into a circular form in quantity insufficient completely to fill it, and this form is then put in a special form of lathes and rapidly whirled. Centrifugal force throws the concrete to the outer portion of the mould, leaving a hole in the centre. The centrifugal pressure developed is 75 to 300 pounds per square inch, which forces much of the water in the mass to the centre, and this runs out at one end of the form. The plan also provides for proper reinforcement. Such a pole is 50 per cent. lighter than a solid concrete one of equal strength, but is slightly heavier than cedar poles of equivalent strength.

Lumber in the War

Estimates prepared by the lumber committee of the advisory commission of the United States Council of National Defence show that 2,000,000,000 feet of lumber may be used for purposes directly connected with the war in the next twelve months. This sounds large, but is actually about 5 per cent. of one year's lumber production of the United States. Construction of the sixteen cantonments to house the new army required about 500,000,000 feet. Second in quantity required comes the wooden shipbuilding program, now estimated at 400,000,000 feet.

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BANGOR, MAINE

Review of Current Trade Conditions

Ontario

Not much that is new can be said about the market situation in Ontario. Interest is pretty evenly divided between the logging situation and the effect of the reduction in the output of munitions. As to logging, it is perhaps a little too early yet to venture a definite opinion about the quantity that will be taken out of the woods during the coming winer. The labor market is still very uncertain. A number of reports received by the Canada Lumberman indicate that labor is very scarce, and that the output during the coming winter will be even less than it was last winter. Reduced operations on the part of some manufacturers, however, may be offset by the presence of new operators in the field, who will take out large quantities of stock. Moreover, the labor shortage may yet improve sufficiently to enable operators to take out a substantial stock.

Just at present the foreigners are dominating the labor market. They are holding out for high wages, taking the position that, as most of the native-born woodsmen have gone to the war, the manufacturers will have to pay high wages for such labor as is available. A little later on, however, when the harvesters return from the West, this situation will probably be altered. About the end of November or early in December improvement of this nature may be looked for, and operators who have not yet commenced logging to any important extent may then find it possible to go into the woods on a more normal scale. This belief is held by a number of manufacturers.

The munition situation is difficult to size up. More or less contradictory interpretations have been made of the announcement in the House of Commons upon this subject, and it may be that the latest statements by the Miniser of Finance and the Minister of Trade and Commerce mean that there will still be large quantities of munitions made in Canada, for which shell boxes will have to be furnished by the woodworking industry. Nevertheless, the situation to-day is that shell box plants in many parts of the country are completing their contracts and not receiving new ones, with a result that large numbers of employees are being laid off. If the shell box production is being reduced permanently it will probably have a considerable effect upon the market. Large quantities of spruce were used in these boxes, and it is current talk at the present time that prices of spruce may be expected to drop. Hemlock is also said by some manufacturers to be in for a lower price. It would not be wise to take too strong a stand, however, on either of these lines, as a great deal will depend upon the outlook during the coming winter and upon the trade situation that develops in the United States. Across the line just at present there is a good demand for spruce for many purposes connected with the war. The building situation in the United States, however, is exceptionally quiet, and it looks as though building operations are rapidly approaching the quiet level which has prevailed in Canada for many months.

It is not possible to sum up the various factors that are affecting the market to-day and to balance them off in such a way as to reach a safe conclusion about the course of prices in the immediate future. The different factors are of such importance that any of them may prove to be more effective than the others, and thus upset one's calculations. Apparently the majority of the trade, in all its branches, are inclined to play safe, although manufacturers are showing sufficient confidence in the market to go into the woods as far as they are permitted by the labor situation, in spite of the fact that stock taken out this winter will cost them much more per thousand feet than it did last winter.

The Ottawa market continues quiet, but stocks are low in a number of cases, and prices have been advancing, particularly for good pine sidings and strips. Red pine also is firmer. Spruce prices are steady. It is thought that the higher prices for the upper grades of pine are the result of lower grades having advanced in price some time ago and continued at a high level. The upper grades are now following in sympathy. Shell box production has largely come to an end at Ottawa, and many employees are now out of work. There is considerable speculation as to the effect this will have on the price of spruce, but opinions vary on this subject. The high prices for pulpwood are counted upon by some lumbermen to keep spruce lumber prices from falling.

Eastern Canada

More encouraging conditions are reported from St. John, N.B., during the past fortnight. A number of mills have closed down for the season, and some of the large ones will be following suit presently. The American market is firmer, and spruce is now selling on a $40 basis, which is an advance of $1. There are about thirty or thirty-five million feet of lumber in stock at St. John, which is not considered excessive, as large quantities of deals are being shipped to the United States. A revival of the English demand would probably stiffen prices to a great extent, as it is not thought now that there will be any surplus. Pine stocks are low, and are expected to continue so. Local trade is quiet. Woodsmen are scarce, and are being paid about $45 per month. It is expected that the output this winter will be lower than usual.

The spruce trade in the Eastern States is very strong, and, while the house-building trade is practically dead, there is sufficient other business to more than offset this. Industrial operations are steadily demanding more and more Eastern lumber. Shingles, lath, and clapboards are still weak at Boston. Prices are reported to be a bit easier. The outlook in the shingle market is not encouraging. Hardwoods are dull, but prices remain firm on account of the heavy requirements of the government.

Prices of Eastern spruce in the New England States have recently shown quite an advance, though as yet it is not possible to say whether the higher prices will be maintained. Some manufacturers are asking a good deal more for random spruce than others. The higher prices are probably the result of a conviction among the trade that Eastern spruce lumber is worth more than it has been bringing. No decided increase has taken place in the demand. There is a good market for spruce frames 8 in. and under, on a $40 basis. Random is rather quiet. The outlook in the New England States is for a quiet trade during the fall, although there is still a lot of war business to be put through, which will help to keep things moving. Retail yards are doing practically nothing, purchasing only what is absolutely necessary for current trade.

The demand for pine at Boston is almost entirely for manufacturing purposes. Building operations are at a standstill on account of the high price of spruce frames and common lumber. It is expected that building operations will be continued throughout the winter.

Great Britain

Stocks have been reaching London a little more freely of late than formerly, and the volume of business on the spot market is keeping up fairly well. Fresh transactions are reported right along, but they are not extensive. Importers and merchants are really doing only a small trade. The output of the home timber industry is gradually increasing. The packing trade is very busy, and is consuming all the suitable material it can obtain. All classes of goods at the London public docks show decreases as compared with the stocks a year ago. There is quite a falling off in deals and battens, but the stocks on hand are expected to last considerably longer than they would in normal times.

Reports from Liverpool draw attention chiefly to the insignificant volume of importation, on account of the lack of steam tonnage. Stocks also are very short, and are likely to become still scarcer, in spite of the curtailment which is taking place in the rate of consumption. If rigid curtailment were not being practised the quantity available to-day would not last more than a few weeks. This situation applies equally to Manchester. There is an urgent call on the part of all merchants for a removal by the government of the various restrictions that are keeping the lumber trade at a standstill. There are no indications at present, however, of the removal of any of these restrictions. Importations of pitch pine, small enough of late, are being restricted still more by the great demand in the United States for heavy timber for the construction of wooden vessels and for many other purposes connected with the war. This, together with the shortage of tonnage, is keeping transactions in pitch pine down to a minimum. Stocks of pitch pine at Liverpool are almost nil.

Reports from Manchester state that prices in the timber trade have now reached three times those prevailing in 1914. It is reported, moreover, that a movement is on foot to increase the selling prices of timber still further. The shortage of hardwoods at Manchester is becoming more acute, and prices are abnormally high. Customers in search of hardwood have to face a continually rising market. Manchester yards in general are almost depleted of imported timber available for sale, but English timber is to be seen everywhere. At Southampton a similar state of affairs exists in regard to available stocks, and merchants are expressing opinions about the government's restrictions which are far from complimentary.

There is no alteration to report in the state of the timber market at Glasgow. Imports of 1,100 standards of white sea red and white deals for government account were recently reported. Trade generally is on very quiet lines, the movement being confined almost

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

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Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

exclusively to requirements for war work. Box making continues very active, and stocks for this purpose are moving steadily from the public storage grounds. A few sales of pitch pine and Oregon pine are reported for shipbuilding purposes.

United States

The general industrial and trade situation in the United States gives promise of an active fall. The volume of trade is increasing steadily, and seems to be limited only by the shortage of labor. There is considerable caution, however, about taking on new responsibilities, as an impression seems to prevail that prices have reached their highest limits in many lines and are likely to come down. The crop outlook continues to be excellent, and the farmers of the country are in a strong position, so that they do not need to market their products immediately.

Stocks of lumber in the hands of Southern pine manufacturers have been greatly reduced since midsummer. A large part of the business during the past three months has been from the government. The demand from the regular trade has not been up to normal, but is picking up to some extent. Moreover, the government business promises to last for some time yet. There are some soft spots in the market, caused by the large government demand having been for special grades, making it necessary to dispose of other lines at reduced prices. Manufacturers of Southern pine are agreed that during the present fall their problem will be to produce stock, not sell it.

White pine stocks are scarce. There is still a strong market for the lower grades used for box making and crating. As the government war pans develop it is becoming evident that there will be a very large demand for good, substantial wooden boxes. White pine prices continue firm. The market for spruce in the Eastern States is strong, as a result of low stocks, small production, and heavy demand. The government's position in regard to Pacific Coast spruce still seems to be doubtful, but there is no question that every available piece of spruce that can be used for aeroplane construction is needed. There is a good market in the East for hemlock, and prices continue very firm, with an upward tendency.

The labor troubles on the Pacific Coast seem to have been pretty well disposed of, and most of the mills have resumed operations on a ten-hour basis. There is a good demand for special cutting bills, and all sawmills are operating to capacity in this line. The outlook for a good logging season is encouraging. The volume of business placed with the fir mills shows an increase. Reports from 144 mills show that production during the week ending September 8 was 50,346,095 feet below normal. Orders received were 10,021,915 feet above actual production. The factory demand for hardwoods shows an increase, largely on account of the demand arising out of the war.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

St. John Trade Showing Improvement

St. John, N.B., Sept. 20.—(Special to the Canada Lumberman.)—A steadying influence has crept into the lumber market during the last two weeks. Many of the smaller mills have finished their season's cut and are shut down, and in a few days some of the large mills will have ceased sawing. This leaves only a few of the largest mills going, and they will not run long after the cold weather comes. Stocks have been absorbed in the American market a little faster of late. The price has risen from a $36 base to a $40 base. This means that largely all stocks are worth $28 to $32 per thousand feet at the mills for narrow American sizes, such as 2 x 3, 4, 6, and 8 in., with $2 to $3 per thousand feet more for wider widths. How long this will continue remains to be seen, but the manufacturer certainly needs it, as this has been, and is now, the most expensive operating year in the history of the lumber trade.

Stocks at St. John are not normal, about thirty to thirty-five million feet being now piled up. This is not excessive, and if any call comes for it, the price will certainly go higher. Large quantities of deals are moving to the States, and large government orders are daily coming on the market. If England should call for any deals whatever there is no telling where the pine will go, as there certainly will not be any surplus to sell.

Spruce boards are still good for $25 at the mills and scarce at that. Pine stocks are extra light at this season, and will no doubt continue to be so, as only a limited cut of pine was made this year.

Local business at the factories is still pretty good, and it is hoped it will continue so for the fall at least. Some mills at St. John expect to cease sawing within the next few weeks, having sawn out all their logs.

Men are still scarce for the woods, wages being $45 per month or thereabouts. Some operators who usually cut logs are not going into the woods at all this season, on account of uncertain conditions. The cut of logs will, no doubt, be below normal unless plenty of help is provided. The short lumber, such as laths and shingles, continue to be slow in advancing. To-day a certain weakness has occurred in laths and high-grade shingles, while low-grade shingles are very firm.

Ottawa Shell Box Employees Now Out of Work

Ottawa, Sept. 21.—(Special to the Canada Lumberman.)—The Ottawa lumber market during the closing weeks of September showed a more decided tendency toward quietness than was noticeable in August and early September, and was considerably quieter than for the corresponding period in 1916. Little trading went on, and both American and Canadian enquiries fell off. Stocks of dry lumber, while they continued sufficient to meet demands, were not large, and the market was not overstocked.

Price advances are reported in a number of cases. Good pine sidings 1 x 7 in. advanced considerably, reaching $75 per thousand feet. All grades of good pine sidings are higher; also 1 in. good pine strips. The red pine quality showed a general advance. Quotations on spruce remained stationary. The reason given by manufacturers for the advances in good quality pine is that the lower grades have been steadily advancing in price while the uppers have practically remained stationary for some time. The local market is not heavily stocked with 1 x 7 in good pine sidings.

With the mills and woodworking plants the situation is rapidly changing, due to the stopping of shell box manufacture, and staffs are being reduced. Contracts for shell boxes have not only been stopped and are not procurable by local plants, but some contracts are being cancelled. One instance is cited in the trade in which a party who had a big shell box contract and had purchased over 30,000 feet of lumber to fill it is not now in a position to do so. A department of the government has asked a local manufacturer if he can take the stocks off the contractor's hands.

Between 150 and 200 employees in woodworking plants at Ottawa will be affected by the curtailment of the shell box industry. Some of the shell box workers were let out around September 15 and others during the period September 17 to 22. The exact number is hard to approximate. By the end of September work on the old contracts had practically ceased with the local plants.

The spruce situation is still a matter of speculation with the lumber trade. Some dealers believe that the price is bound to decline following the stopping of shell box orders. Others believe the high prics prevailing in the pulpwood market will keep spruce at its present levels.

Mr. C. Jackson Booth says that 1917 has been the worst season in many years from the mill end. He hopes that the cessation of the manufacture of munitions will ease the mill labor situation. During the past two weeks the Booth sawmill at the Chaudiere has operated up to only 75 per cent. of its day working capacity. This has necessitated a few men being laid off in the sawmill. The reduction of the mill cut was made on account of the scarcity of pilers to handle the sawn lumber in the yards. Pilers, Mr. Booth states, are of a roving class, but he has hopes of securing sufficient labor of this kind to allow his sawmill to operate to capacity to the end of October. Logs from the Upper Ottawa are coming down well. The level of the Ottawa River fell considerably during the week of September 15 to 22. Unless a wet period sets in before the end of the month or early in October there may not be sufficient water-power available to keep the sawmills at the Chaudiere open as late as expected. The Booth interests are only sending a few small and scattered shipments to European markets. "The lots are so small that they make practically no difference to us," says Mr. Booth regarding these shipments.

The W. C. Edwards Company, one of the principal shell box manufacturing firms at Ottawa, told the representative of the Canada Lumberman that it had not been able to secure new contracts for shell boxes. This plant, during the latter part of September, was working on old shell box contracts, which it is expected will be filled early in October. If new contracts for boxes are not secured, about 60 hands will be let out. The lumber situation with the Edwards plant has

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Order from Wholesale Grocer or Supply House

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10 and 12 William Street, TORONTO

Quebec Office: Montreal, P.Q.
W. H. Escott Co., Limited, Winnipeg, Man.
Calgary, Edmonton, Saskatoon, Regina.
Kirkland & Rose, Vancouver, B.C.

Plants: Brownsville, Ont.; Burford, Ont.; Belmont, Ont.; Hickson, Ont.

Maple Leaf Saws

Manufactured in Galt, Canada

We absolutely guarantee every Maple Leaf Saw. The fine Razor Steel used in all our saws is manufactured exclusively for us. Our secret tempering process refines and toughens the raw material to such an extent that Maple Leaf Saws will stand up under the most severe tests and last longer than any other saws on the market.

Write for our catalogue and prices

SHURLY-DIETRICH COMPANY, LIMITED

GALT, - CANADA

WESTERN BRANCH—1642 Pandora St., Vancouver B.C.

EASTERN BRANCH—Hull, Quebec.

shown little change during the past two weeks. On the whole, the operations of the mill this year have been satisfactory.

The labor situation with the Hawkesbury Lumber Company has shown some improvement since the last report, and it is expected that the sawmill will work to the end of October or into early November. Regarding the camp and woods operations of this company there is nothing new to report. Gilmour & Co., wholesale lumber dealers, report a satisfactory trade for the summer months, and the outlook for fall and winter operations is reported to be as good as could be expected. "We can sell all the lumber we have at a good figure," was the report from this office. Gilmour & Co. did not care to express a definite opinion as to whether or not the price of spruce would decline following the cessation of shell box manufacture. "There is not a great deal of spruce on the market, and I am inclined to think that the price will keep up, if it does not advance, both in Canada and the United States," said Mr. Gilmour.

Last week the estate of James Davidson completed its last order for 4.5 shell boxes, having supplied the 10,000 boxes contracted for. When this order was finished, between 30 and 40 hands were let out. All of the men working on the 4.5 box did not go, some being kept over to work on the Bethlehem order box. This contract, the last that the Davidson Estate has, was finished during the last week of September, and upwards of 40 or 50 more hands were let go. Work on the new bush camps that this firm is establishing is proceeding satisfactorily. Cutting operations in the woods have already began.

The McAuliffe-Davis Lumber Company completed its last shell box contract on September 19. Between 20 and 25 men were let out. During the preceding week, as the work slackened, other employees had been let out. About 75 men in this plant were affected by the stopping of shell box orders.

Nova Scotia Building Many Schooners

Parrsboro, N.S., Sept. 21.—(Special to the Canada Lumberman.)—The schooner Laura C. Hall, of Parrsboro, has been purchased by the Anglo-Colombian Development Company, Ltd., of London, Eng. This vessel was built at Parrsboro nineteen years ago, and registers 100 tons. The purchase price is said to $5,500, which nearly covers the cost of building, but, of course, prices were very much lower nineteen years ago than they are now. The latest owner bought the vessel two years ago for $1,800, and has sailed her successfully two seasons, so it is evident that she did not owe him anything after he made the present sale. The schooner sails to-night for New Haven, Conn., where she will have an engine installed and will load a general cargo for Panama. On arriving at that port she will be employed along the coast of Colombia. Her crew are all Parrsboro men, five in all, and three of them—the master, mate, and cook—hold masters' certificates, which seems to indicate that masters are now more plentiful than vessels.

The twin schooner Minas Queen, which was launched at this port last December, was torpedoed and sunk last month while on the voyage from France to New York. All the crew perished except the boatswain. The master and mate were from the Parrsboro shore, the master from Advocate Harbor and the mate from Parrsboro town. The schooner was sold last spring to Newfoundland parties and was returning to New York in ballast, after delivering a cargo of oil at a town in France. She was a remarkably fine vessel of 456 tons register, and was said to be the best vessel of her class ever built in Canada, as her planking was practically all of pitch pine. A schooner of the same size, built from the same model, will be launched from the same yard the first of October, but, like all the vessels built on this shore this season, she was sold before she was half-finished. She will be succeeded by a four-masted schooner of about 800 tons register and a carrying capacity of about 1,500 tons, which will be commenced immediately and launched early next spring.

It is probable that very little lumbering will be done in this region next winter, except in the way of getting out ship frames and planking and, possibly, some special lines of lumber for the United States trade. The lumber dealers have more lumber on hand than will be required for the trans-Atlantic trade, even if the embargo should be raised, and about all the men to be had will be wanted to get out ship timber.

U. S. Hardwood Markets Strong

The Hardwood Manufacturers' Association of the United States, in their market letter under date of Sept. 22, say:

As time goes on the fact becomes more and more apparent that government buying of lumber is going to dominate the market for some time to come, reducing the output for private and commercial interests proportionately, so that any danger of overproduction is far away. While there is a slowing down of demand for some items, and an occasional concession, all hardwoods, without regard to kind and grade, are good property, and there is no occasion whatever for throwing them on the market at a sacrifice. The general situation is very strong.

The improvement in the car supply has continued, and many mills are getting all the cars they need. We believe, however, that the movement of troops and crops this fall will more than offset the increased efficiency that has been gained. As a matter of fact, the improvement in the car supply has induced some shortsighted producers to place cars of hardwood lumber in transit. This is a practice that can only serve to demoralize conditions.

There is a heavy demand for such hardwoods as are used in the manufacture of army wagon transports and motor trucks. The lower grades of all kinds of lumber are in strong demand, and there never before has been such a market for the product of box factories. Sash and door and furniture trades are not particularly active.

The general opinion seems to be that we will have a heavy fall trade, and that prices will be maintained.

Oak.—One inch F. A. S. and No. 1 common plain and quartered oak are not particularly active, due largely to the slump in building operations. Business with interior finish mills, flooring plants, and high-grade yard trade is decidedly off. The extraordinary demands of the government, however, continue to tax the ability of the mills, and there seems no possibility of an accumulation of stocks. Low-grade oak continues active.

Poplar.—Everything in poplar continues strong, with light stocks on hand. Poplar prices are strong, and will likely continue so as long as the log supply remains short. Production continues below the deman. No. 2 and No. 3 common are in strong demand for the box trade.

Chestnut.—No. 1 common and better chestnut is in better demand than thirty days ago. Sound wormy and No. 3 common rule strong in price and small stocks at the mills.

Basswood.—Basswood continues in very heavy demand, and mills are practically sold up in the wood, green and dry.

Ash.—The ask market is in a class by itself. There is no one who really knows what the price of ash is, and in getting prices they vary from $5 to $25 per thousand, according to what the stock is going to be used for and how big a hurry they are in for it.

New York Markets Firmer

Simpson, Clapp & Co., New York, in their monthly market letter say: With the fall season well advancing and recent vessel arrivals not above normal, we are pleased to report the market more steady. While there has been no increase in building operations in the city, government work on a more or less extensive scale in suburban sections has commanded good-sized orders from local yards. This applies especially to boards, with the result that to-day there is a good demand for them, particularly spruce. There has been a better enquiry for spruce lath, with the result that prices have improved.

Dunlop Advertising Manager Back from the East

Mr. A. A. Briggs, the advertising manager of the Dunlop Tire and Rubber Goods Company, has returned to the head office at Toronto, after a lengthy tour in the interests of the company. Last year Mr. Briggs covered the Western territory, going as far north as Alaska. This year he covered the Eastern provinces of Canada to Sydney, C.B.

On these trips Mr. Briggs makes a thorough enquiry into the advertising conditions affecting the tire and rubber market, locally and generally. He is usually in touch with the automobile clubs; makes it a point to meet all the important garage men and automobile dealers in every city he visits, and wherever possible he travels in an automobile, so as to become thoroughly acquainted with the road conditions with which Dunlop tires have to contend. Mr. Briggs reports that in Quebec the road from Montreal to Quebec and the King Edward Highway, from Montreal to Rouse's Point, are unexcelled on the continent, and possibly only equalled by the Vancouver Island Highway. On the other hand, some of the roads in the East "would give an army tank a good wrestle," as Mr. Briggs graphically expresses it. During his travels Mr. Briggs was frequently interviewed, and the material appearing has been valuable publicity for the Dunlop Company. Mr. Briggs is the only advertising man who undertakes an extensive trip in the interests of his company and makes a study of the conditions that influence and control trade, as well as enquiring into the best available local means of advertising.

The latest converts to the general advertising of lumber are the members of the Western Pine Manufacturers' Association, who decided at a recent meeting to levy an assessment of 5 cents per thousand feet upon their output for the advertising of Western white pine during the next three years. The lumber will carry an association trade mark as a guarantee of quality, and the advertising will call attention to the fact that the use of a trade mark puts both the individual manufacurer and the association behind the goods. Western white pine is a widely distributed species of many admirable qualities, and the public will learn that there are several hundred billion feet of standing timber in this territory, so that the user of the wood need have no fear for future supply.

Teas for the Camp

The question of tea is getting to be an interesting one, for with the advancing prices it is now very difficult to procure a quality of tea which will suit the men, and at the same time at a moderate cost. In this connection we have to advise you that we are fortunate in having a quantity of low priced kinds on hand, and have evolved therefrom a blend of Mixed Tea, which is a splendid drinker, having a full body along with a measure of flavour. We are able to let you have this extra value, packed in hundred pound chests, at twenty-one cents.

SEND US AN ENQUIRY

H. P. ECKARDT & CO.

Wholesale Grocers

Church Street and Esplanade, Toronto

Hoe Chisel-Tooth Saws

No saw can equal the cutting quality of Hoe Chisel-Tooth Saws. Our No. 2½, illustrated, is especially adapted for mills cutting heavy steam feeds. This size also made in thin gauges for Edgers, Bolters and Lath Machines. We are pioneers of the industry. Nearly 100 years of saw making.

Write for literature and prices

R. Hoe & Co.

504-520 Grand Street

New York City

Trade Solicitors Trouble Makers

Retail Lumbermen Who Employ Them Encourage a Dangerous Business Parasite

One of the subjects least often discussed at lumber conventions came in for vigorous handling by Mr. W. R. Hudson, of Detroit, at the recent meeting of the National Retail Lumber Dealers' Association, at Chicago. Mr. Hudson had been asked to prepare an address on the question "Do Retail Lumber Dealers Need Solicitors to Secure Business for Them?" After a general introduction, Mr. Hudson said:

The topic assigned me was placed in the form of a question. Why there should be anything to suggest or even intimate that the subject is debatable I cannot conceive, for it is the great, ugly seed we have all at some time sown, and, even when sown by one of us, we have all suffered to reap a ruinous crop of disunity, disloyalty, disorganization, hatred and malice.

Solicitation is a pernicious practice; its destroys wantonly and viciously, without profit or increased volume of business, and not only business, but the very character of man; for it promptly draws all men of the business in question down through the channels of distrust and enmity to a level of weakened minds and loss of character, and saps life of its happiness, resulting in doing business for the hatred and not the enjoyment of it, and creating destructive and not instructive and beneficial business. You lower your standing in the community, for your distrust steals away good judgment; you become slave, and not master, of the business you would wish to develop and which is degenerating you. Such disruption leads straight into your social and home life.

It is remarkable the survival of business where solicitation is practised. It has only been through good judgment and sound sense of some of the lumbermen who on such occasions have stemmed the tide of such foolish and light-witted practices, and have brought business back to normal.

A solicitor's practice is virtually to arouse, excite, tempt, allure, or entice by some tangible qualities, with such sense of demeanor as to attempt to force an entrance into the pleasant and satisfactory business relations of a customer with a competitor. It is not the questionable or undesirable customer, but the cream of the trade, the asset customers, he solicits. His biggest asset is to carry or make gossip, his noblest truths are falsehoods, his only chance to get business is to cut the heart out of price. His slogan is: "My business is to get business," and he loses sight of his concern's interests entirely.

Those of you who send out solicitors know that you do not employ high-priced, highly-intelligent men, keenly trained in the ethics of business. You insure cashiers and other high officials of your organization, taking no chance of loss, but you dump the very vitals of your business, with no protection, into the hands of a free lance, letting him play the game as he chooses, sowing inadvertently distrust, contempt, false representation, inferior grades, and sometimes bankruptcy—all of this with the idea of getting business under emulous competition.

The world is changing; life habits are changing; business is changing; governments are changing. We are looking now into the early dawn of a new era, and as the light begins to throw its peerless rays it is warming men's hearts and tempering heart, soul, and mind to the necessity of co-operation.

Reaping the Whirlwind

Ah! What do you reap from solicitation? Ill-will and unfriendliness with the very men with whom your interests are in common; destruction of co-operation; disrupted prices and with no terms; loss of customers that are your assets; gain of riff-raff trade; no profits; distrust and dissatisfaction with mankind and particularly yourself; worry that reaches into your home and upsets domestic tranquility; the possibility for worthless characters to establish themselves in the contracting business, ruinous to the legitimate trade which is your real assets, and hazardous to the home-building public; filling the courts with liens.

You personally become correlative to and an accomplice of dishonest knaves and shyster contractors and builders. Now, when you go after a particular customer of a competitor of yours, do you, or does your solicitor, say to him: "I am giving you a price or quotation upon which I am losing money, but after a while, when you become a good and settled customer, I will make up this loss, for you will, of course, have to pay as much as the other dealers have been charging you in order that I can make a living." And then you add: "Mr. Customer, there is only one possible way that you can ever expect to get better prices legitimately, and that is when, through co-operative economic channels, the dealers will be able to reduce cost."

And when your solicitor lands a competitor's customer at destructive prices will you immediately send out a notice to the trade that is your asset, saying: "We have cut the price to get Mr. Smith away from the Jones Lumber Company. We recognize this, of course, as discriminating, as it places Mr. Smith, through us, at the advantage over you: therefore, you can have the same prices as we have quoted him"?

No! No! You will not do that. The sickly idiosyncrasies of business that practises solicitation become susceptible to the cunning trade. Your mentality is lowered to the belief that your fellow-lumbermen are rotten at the core, and what your undesirable trade has left untold your decrepit imagination has filled in.

Your trade has left you. Those that I have referred to as your assets are big enough to buy their lumber wholesale, and they have developed into a lumber-dealing contracting concern. Those who cannot do that strive one, using you as the lumber-yard-draying part of their own business.

In the turmoil of it all you have saddled the trade to ride at will on terms, accommodations, and prices ruinous to them and yourself.

Does a standard product like lumber need to be peddled? Do solicitors stimulate a demand for one foot more lumber in the aggregate? No!

The solicitor is a parasite; his salary an economic waste; he is non-productive; he cannot produce a single useful thing.

When the customer, on the other hand, goes to one or more of the yards of his own choosing and comes in contact with the firm's organization which has expended its energy to promote efficiency and not destructiveness and which economizes by letting the trade come to it, then he can get better prices and better lumber, and the trade is benefited rather than disrupted.

Service, quality, and price are in a general degree standardized and the cost of doing business is minimized. Your trade is firm, and your assurance of reasonable profits is equal to that of a banking business. You have attained the equal proportions of the solid business.

Strike from your vocabulary the word competition and replace it with the slogan "co-operation," and you have automatically dealt the death-blow to solicitation and are facing in the right direction to sow successfully the seed of unity and association. You will supplant the methods of soliciting with methods of educating the trade.

Aesthetics of Co-operation

Associated, you can place exhibits in your community that will educate all the trade as to the best lumber and the most practical grade to use for certain purposes. The artcraft of doors, interior finish, as well as that of style and character of the exterior of the home, the durability of one class of lumber, timber, etc., over others, shall enter into the associate salesmanship.

The owner can take the plans from the builder or architect, go to the association exhibit and realize the detail work of the home prior to its completion. This method of salesmanship enables the owner of the home-to-be to put into it his and her character and personality, for that is what every home-owner has wished to do and has been unable to do further than their imagination would carry them in plans and specifications written and drawn out by an architect.

And how closely are the architects and lumber dealers co-operating Pitiful to behold isn't it We should trust ourselves to the architects, and make them feel our weight and how impossible it is to do without us. We both have a high calling in our separate but relative lines; for the one is the creative and the other the productive contributor to man's most sacred place on earth—his home.

Lumbermen cannot live by themselves alone; they are dependent upon every other unit of business. We are here to apply the lubricating oil to the ever-moving wheels of progress, and not to apply the brakes. We must advance or go backward; we cannot stand still. We must grow, think, and apply ourselves, and with this timely national organization we can at least endeavor to solve such problems as are necessary to advance our business to the highest point of efficiency. Those who will not see, those who do not enlist in this economic cause, necessarily must drop by the wayside—not because of organized competition, but because they tried to reap and not to sow; because they continued to apply the brakes of wornout and ever-failing practices so ruinous to the business, and the man, and the community. Co-operation to perfect and unite efficient business is the uninterrupted current drawing us toward success.

Canadian Lumbermen's Association Meeting

The Canadian Lumbermen's Association, the Canadian Forestry Association, and the Canadian Forest Protective Association will hold their annual meetings in Montreal during the first week in February, 1918. It is expected that the three associations will conclude their meetings with a joint banquet.

Shipwrights, joiners, and laborers to the number of about 1,500 recently went on strike at Seattle, Wash., tying up a number of wooden shipbuilding plants. The strike was called as a part of the effort on the part of the organized labor to enforce an eight-hour day in lumber and shingle mills.

NEW ZEBRA, WOOD, WESTERN UNION, and PRIVATE CODES USED.

Telephones:
1391 Long Distance.
400 Private Branch Exchange.

Cables:
"HILLAS," HULL

W. N. HILLAS & COMPANY

WOOD BROKERS

FOR EVERY CLASS OF TIMBER

***Head Office*: HULL, England**

To the Lumber Companies of Canada:

You have the Goods. Place your Lists with full particulars in our hands. We are in daily touch with all the Buyers in the United Kingdom.

PLEASE NOTE.—We pay cash against all documents, and take the whole of the Delcredere risk on Buyers.

Install a KRAFT SODA MILL

CANADA has another big war opportunity: Great Britain needs more wood pulp. Install a small Soda Pulp Plant and Supply this need by converting your Slats, Tops, Bottoms and waste wood around the Saw Mill into pulp. We can dispose of any amount. Previous sources of supply in Sweden, etc., have recently been withdrawn and Canada now has a free field in Great Britain to market unlimited quantities of wood pulp. We can arrange contracts for long periods.
The cost of installing plant is small and you make a sure profit from waste material.

Write to-day for further details

Becker & Co., Ltd.

34-40 LUDGATE HILL
LONDON, E. C.
ENGLAND

THE
LARGEST IMPORTERS OF
WOOD PULP

We have specialized in Canadian Pulp and have imported ninety per cent. of the Pulp supplied to Europe since 1899.

SOLE AGENTS FOR

CHICOUTIMI PULP CO., Chicoutimi, Canadian Hot Ground Spruce.
LAHAVE PULP COMPANY.
MACLEOD PULP COMPANY, Liverpool, Canada.
NOVA SCOTIA WOOD PULP AND PAPER MILLS COMPANY.
RIORDAN PULP AND PAPER CO., Montreal. Easy Bleaching Canadian Sulphite Pulp.
ST. LAWRENCE SULPHITE PULP COMPANY.

1500 CARS this Year and not a kick!

L W RITE-GRADE C A
INSPECTED

That's a RITE-GRADE record. Every car of RITE-GRADE you sell, Mr. Dealer, is a full set of hardware for the coffin of the shingle that's not up to grade, and is a boost to organized progress in the Shingle Industry.

Make that next Car a RITE-GRADE Car

THESE MILLS MAKE THEM

A. P. Allison & Company ..... Vancouver, B.C.
Canadian Western Lumber Company, Ltd. ..... Fraser Mills, B.C.
Huntting-Merritt Lumber Company, Ltd. ..... Vancouver, B.C.
Pitt River Shingle Company ..... Port Moody, B.C.
Port Moody Shingle Company ..... Port Moody, B.C.
Stoltze Manufacturing Company ..... Vancouver, B.C.
Charles W. Tait & Company, Limited ..... New Westminster, B.C.
Thurston-Flavelle Lumber Company ..... Port Moody, B.C.
Vancouver Lumber Company, Limited ..... Vancouver, B.C.
Westminster Mill Company, Limited ..... New Westminster, B.C.
Aloha Lumber Company ..... Aloha, Wash.
Alger Shingle Company ..... Sedro-Woolley, Wash.
The Atlas Lumber Company ..... Seattle, Wash.
Baker River Lumber Company ..... Concrete, Wash.
Bratlie-McClelland Mill Company ..... Ridgefield, Wash.
C. A. Blackman & Company ..... Everett, Wash.
Bloedel Donovan Lumber Mills ..... Seattle, Wash.
Cherry Valley Shingle Company ..... Duvall, Wash.
Case Shingle & Lumber Company ..... Raymond, Wash.
Clear Lake Lumber Company ..... Clear Lake, Wash.
Cory Shingle Company ..... Sedro-Woolley, Wash.
Craft Shingle Company ..... McCleary, Wash.
Day Lumber Company ..... Big Lake, Wash.
Doty Lumber & Shingle Company ..... Doty, Wash.
F. G. Deming Lumber & Shingle Co. ..... Markham, Wash.
Garner Shingle Company ..... Everett, Wash.
Grays Harbor Shingle Company ..... Aberdeen, Wash.
Hillview Shingle Company ..... Montesano, Wash.
Jamison Lumber & Shingle Company ..... Everett, Wash.
Eastern Sales Office: Kansas City, Mo.
John McMaster Shingle Company ..... Seattle, Wash.
L. B. Menefee Lumber Company ..... Portland, Oregon
North Western Lumber Company ..... Hoquiam, Wash.
Pontiac Shingle Company ..... Seattle, Wash.
Pacific Timber Company ..... Everett, Wash.
Stearns Lumber & Shingle Company ..... Stearnsville, Wash.
M. R. Smith Lumber & Shingle Co. ..... Kansas City, Mo.
Sauk Shingle Company ..... Sauk, Wash.
Sunset Shingle Company ..... Montesano, Wash.
St. Paul & Tacoma Lumber Company ..... Tacoma, Wash.
Three Lakes Lumber Company ..... Three Lakes, Wash.
Two Lakes Mill Company ..... Seattle, Wash.
The Wilcox Shingle Company ..... Aberdeen, Wash.

L W RITE GRADE C A
INSPECTED

This is the mark that stands for "INSPECTION"

Advertising and Dealer Helps

Send for the New 1917 Folder: It will help every Dealer's business in shingles. Gives the University of Washington Fire Test, fully illustrated. Proves that patent roofings are the real fire menace. For this and other Dealer Helps and Information write to

Shingle Branch

West Coast Lumbermen's Association

SEATTLE (Henry Bldg.) WASH.

Personal and Miscellaneous

The Forest Mills of British Columbia, Ltd., Revelstoke, B.C., will take out 25,000,000 feet this season.

Mr. R. McDonagh, of Hart & McDonagh, Toronto, left on September 22 on a buying trip to the South for the Canadian Aeroplanes, Limited.

Mr. Gerard Power, of the River Ouelle Pulp and Lumber Company, St. Pacome, P.Q., recently paid a visit of a few days to Toronto and Hamilton, and was a welcome visitor at several lumber offices.

A report from Ottawa states that many plants which formerly were engaged in the production of 8 in. and 9.2 in. shells for the British Government will be converted into plants suitable for producing 6 in. shells.

The Vancouver Creosoting Company has obtained fresh shipments of creosote from Nova Scotia and is now busy treating piles for the C.P.R. pier at New Westminster. The company report that they have several other large orders on hand.

About nine million acres out of a total of two hundred and ten million acres in Quebec Province are under agricultural development. The chief crop of the remaining two hundred million acres is, and will always be, timber, for the reason that the soil is unfitted for tillage.

Jackson & Tindle, Buffalo, N.Y., announce that on September 29 they moved into new offices in the Niagara Life Building, corner Mohawk and Franklin Streets, where they now occupy rooms 502-505. The offices of the Superior Lumber and Cedar Company, Inc., and the New Ontario Colonization Company, Ltd., have also been moved to the new quarters.

Liverpool and Manchester Stocks

The following report upon Liverpool and Manchester stocks for the month ending August 31, 1917, is furnished by H. W. Lightburne & Co., Liverpool, England:

Spruce and Birch

Liverpool

	Import.			Consumption.			Stock.		
	1915.	1916.	1917.	1915.	1916.	1917.	1915.	1916.	1917.
N.B. and N.S. spruce and pine, stds.	5,400	5,240	160	3,830	3,980	730	14,000	11,140	2,870
Birch logs, loads	680	680	20	420	160	20	600	1,300	240
Birch planks, stds.	818	394	0	303	140	24	764	533	109

Manchester

Spruce, stds.	10,130	10,140	730	6,810	3,150	850	16,550	20,970	4,990
Birch logs, loads	1,240	60	0	220	60	0	1,400	300	60
Birch planks, stds.	364	158	0	255	55	36	600	527	200

Stocks in Manchester and Liverpool Combined

Spruce

	1913.	1914.	1915.	1916.	1917.	
Manchester	21,820	14,100	16,550	20,970	4,990	
Liverpool	9,800	6,650	14,000	11,140	2,870	
	31,620	20,750	30,550	32,110	7,860	Stds.

Birch Logs

Manchester	340	880	1,400	300	60	
Liverpool	580	500	600	1,300	240	
	920	1,380	2,000	1,600	300	Loads

Birch Planks

Manchester	564	521	600	527	200	
Liverpool	740	334	764	533	109	
	1,304	858	1,360	1,060	309	Stds.

Tell the Purchaser How Much It Will Cost

"Buy a nice hardwood floor for your kitchen—$6.76, nails and all included."

This idea, suggested by H. R. Isherwood, of the retailers' service department of the National Lumber Manufacturers' Association, when carried into effect by retailers is proving a decided success.

"When the average prospective purchaser walks into the office of a lumberman of the old school, asks the price of maple flooring and is told $40 or $60, he knows as much as he did before. He goes away with a feeling that his hardwood floor is going to cost a lot of money and perhaps he had better not get it. He doesn't know that the price given him was for a thousand feet, said Mr. Isherwood.

"On the other hand, the lumber dealer of the new school sells flooring by the hundred feet, or better still, by the floor. Thus the average kitchen is ten by twelve, and would require 160 feet. This at $40 a thousand would be $6.40, leaving thirty-six cents for nails."

Just One of the Many Types of JEFFREY CHAINS

for Conveyers for the Economical handling of Logs, Lumber, Refuse, Chips, Pulpwood, etc.

Jeffrey Chains are a recognized standard in Lumber and Woodworking industries.

They are built especially to meet the demands of Elevating, Conveying and Power Transmission Service—and they do it.

Let us help you to decide as to the type best fitted to your requirements. Our latest Chain Catalog and Price-List No. 211-6 should be in your possession. Send for your copy.

The Jeffrey Manufacturing Company,

Canadian Branch and Warerooms, MONTREAL

Headquarters for Dependable Chains, Sprockets, Buckets, Gears, Hangers, Bearings, etc.

There's a DISSTON Cross-cut just suited to your needs

—a style for every requirement of service or sectional preference.

DISSTON SAWS AND TOOLS

have been the standard of lumberman and mechanic for nearly four score years because their quality insures satisfactory and economical service.

Henry Disston & Sons, Ltd.

Toronto

Registered

Trade Mark

FOR SALE

Dry Birch

1 1/3 years on Sticks

8/4	1s and 2s	4 Cars
10/4	"	1 "
8/4	No. 1 Common	3 "
10/4	"	1 "
12/4	"	1 "
8/4	No. 2 Common	4 "
10/4	"	1 "
12/4	"	1 "
8/4	No. 3 Common	4 "
10/4	"	2 "
12/4	"	10 "
16/4	Sound Boxed Hearts	4 "
20/4	" "	1 "
4/4	Log Run, Mill Culls Out	2 "

Birch

1917 Cut

6/4	No. 1 Com. & Bet.	20 Cars
8/4	" "	10 "
12/4	" "	10 "
8/4	No. 2 Common	5 "
12/4	"	5 "
4/4	No. 2 Com. & Bet.	20 "

Quebec Spruce

2 x 4 x 6/16	Merch.	2 Cars
5 x 6/16	"	4 "
6 x 6/16	"	10 "
7 x 6/16	"	2 "
8 x 6/16	"	10 "
9 x 6/16	"	2 "
10 x 6/16	"	5 "
11 up x 6/16	"	2 "
3 x 4/6 x 6/16	Merch.	5 Cars
6 x 6/16	"	5 "
7 x 6/16	"	4 "
8 x 6/16	"	8 "
9/11 x 6/16	"	2 "

1 x 3 up 6/16 Mill Cull 2 Cars
2 x 4 up 6/16 Mill Cull 8 "
3 x 4 up 6/16 Mill Cull 2 "

The Fall is near—the usual shortage of cars will be accentuated; let us ship those orders whilst there is a possibility of securing cars.

If any of the above interest you, will be pleased to quote prices

E. M. NICHOLSON & CO.

202 Board of Trade Building

MONTREAL

Pulpwood Rossing Waste

Can you give me information in regard to the difference between rossing pulpwood in Green Bay Barkers and barking drums in which they are tumbled? How many men will be necessary for a camp to take out 15,000 cords of spruce wood for paper pulp?—R. G. McConnell.

The difference between rossing pulpwood in the Green Bay Barkers and tumbling it through the drums, according to advice which we have from those who are engaged in the production of pulp, is practically nil, provided that the bark from the barkers can be used as fuel. The drums are used only for wood that is taken from the water, and the bark it removes is emptied back into the water. With the barkers there is 15 per cent. more waste than with the drums, but the bark, being dry, can be used as fuel. One large company in Eastern Canada fires a 500 h.p. boiler with its barker refuse. If coal were used for this boiler the quantity consumed every day would be 20 tons, which at $6.50 per ton would amount to $130 per day. The four Green Bay barkers in use treat on an average 100 cords of pulpwood per day, and of this quantity 15 cords more are wasted with the barkers than with the drums. At $8 a cord this amounts to $120. It will be seen, therefore, that when the bark is used as fuel there is very little difference between the use of the barker and of the drum.

The number of men required in a camp to take out 15,000 cords of spruce pulpwood will depend somewhat upon local conditions. Two good men should average at least 2½ cords per day, but a safe estimate is one cord per day for each man in camp, including cook and helpers. With this as a basis it should be possible to estimate the cost and time required for taking out 15,000 cords, according to local conditions and the facilities available.

Watch the Braze

The braze is the weakest part of a band saw, and as such should be subjected to constant and close inspection. The reason why it is the weakest part of the saw is because the braze itself and about one inch each side of it is bound to be milder in temper than the rest of the saw—a quite common opinion among filers, to the contrary notwithstanding.

It would seem that a slight consideration on the part of those who contend that a braze can be fully tempered would suffice to dispel the impression, but it seems to persist As the temperature necessary to prepare the braze for a high temper would melt the solder, it is obvious that only a comparatively mild temper can be secured.

The original temper of the saw is drawn by the hot irons in brazing. After this all that can be done is to finish the braze and then stiffen it, but it is impossible to secure the original high temper.

As the material right at the braze is milder than the rest of the saw, it naturally follows that the braze will pull tension quicker than any other part. It is also liable to bends when changing saws on the wheels or handling them in the filing room; therefore the braze should be carefully examined after every run. If necessary, it should be levelled and tensioned before placing on the wheels again, otherwise a crack in the braze will quickly result. When this occurrs the braze should be immediately re-made, as there is always much more danger attending a crack of this kind than one in the body of the saw.

Some filers follow the practice of punching a crack in the braze just as in any other part of the saw. While this sometimes proves successful, it is not good practice, because it usually does not overcome the trouble and subjects the saw to great risk of further breakage at the braze, besides placing the operators in danger of serious injury.

Breakage at the braze will be practically eliminated if rigid inspection is made after each run and any indication of weakness or tension pulling corrected before it has a chance to develop.—Disston Crucible.

Better Buildings in French War Area

If present plans are carried out, the invaded parts of France will be rebuilt on a larger and finer scale than before they were levelled to the ground by the German armies. Narrow streets in cities and towns will be widened. The little one and two-storey dwelling will be enlarged and beautified. Unsanitary conditions will be eliminated and other conditions measurably improved. In all probability these sections of France will afford a market for quantities of lumber from Canada and the United States and other building materials, due in part to the ravages of war on both French man-power and materials of all kinds.

Pennsylvania Retailers' Directory

The Retail Lumber Dealers' Association of Pennsylvania have published a very complete directory of dealers throughout the state. The list is thoroughly up to date and is being revised and published every three months by the association. In addition to the list of dealers, it contains a large amount of useful advertising. The address of the association is 730 Park Building, Pittsburgh, Pa.

Lumbermen's and Railroaders' Clothing

Guaranteed Pure Wool Mackinaw Coats, Pants, Shirts, Mitts Socks, Underwear, Etc., of the Highest Grades.

Plain and Fancy Pure Wool Mackinaw Coats, with high seven-inch collar, close fitting, with tab at throat. Sizes 36 to 46.

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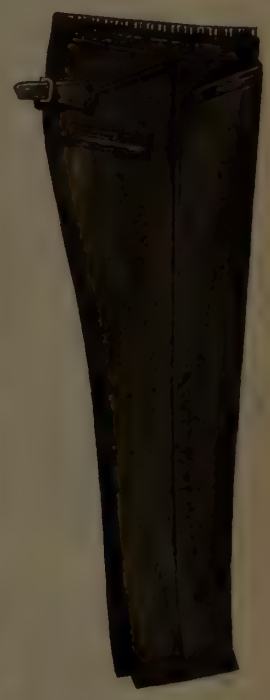

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Montreal — Winnipeg

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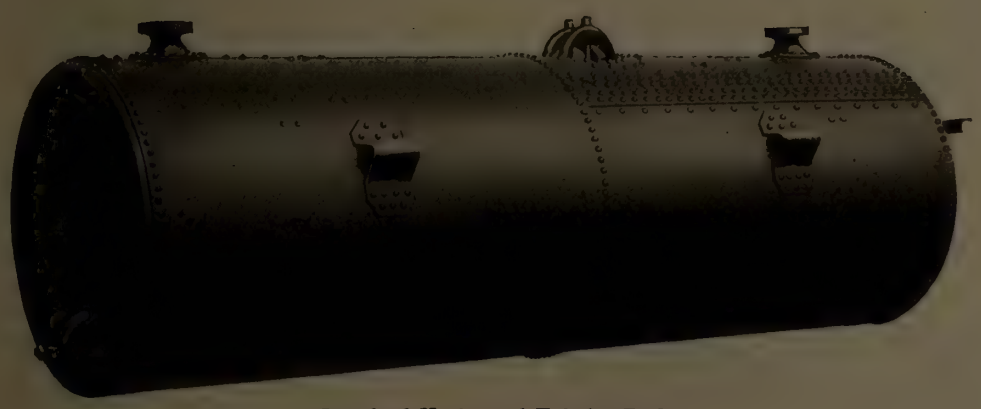

Standard Horizontal Tubular Boiler

¶ We have received recently several consignments of plates and tubes for standard boilers.

¶ While this material lasts we are enabled to make reasonably prompt shipment of boilers.

¶ Enquiries to our nearest sales office will receive personal attention.

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STE. MARGUERITE, QUE.

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Northern Office:
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Southern Office:
HATTIESBURG, MISS.

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Manufacturers and Dealers
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Dressed and in the Rough
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Wholesale Dealers in Rough and Dressed Lumber, Lath and Shingles
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EDGINGS

Ontario

The Fleming Tie and Lumber Company, Ottawa, Ont., have obtained a charter.

Dafoe & Waller, sash and door manufacturers, Napanee, Ont., have sold out to W. D. Widmer.

The Dominion Department of Indian Affairs held an auction sale recently at Toronto, when the timber on Hope and Beckwith Islands, in the Georgian Bay, was sold to Mr. Joseph Oliver, of Toronto, for $114.500.

The International Lumber Company, a corporation created under the laws of the State of Minnesota, has been granted a provincial licence to carry on business in the Province of Ontario and to manufacture lumber, lath, shingles, etc. The Keewatin Lumber Company, Ltd., Keewatin, Ont., has been appointed attorney for the International Lumber Company.

Lauder, Spears & Howland, Toronto, have completed the erection of their sawmill at Lost Channel, about 10½ miles from Pakesley, a station on the C.P.R. The mill will operate upon logs taken out in the Pickerel River district. The capacity of the mill is about 50,000 feet per day. The company have also completed, in co-operation with the Schroeder Mills and Timber Company, the construction of the railroad from the mill into Pakesley, and will ship their lumber out to the C.P.R. over this road.

It is expected that the new plant of the Mattagami Pulp and Paper Company at Smooth Rock Falls, Ont., will be running this month. Two of the digesters are already in position, and the third will be added in the near future. The slasher mill is in operation and is turning out 2,500 cords daily, and by the end of the month there will be a pile of 35,000 cords on hand, which will keep the mill in operation for the coming season. The company recently completed new brick offices, and the work of laying out the model town site is going ahead rapidly. Housing accommodations will be finished this fall for 125 families.

A logging railroad, to be known as the "Key Valley Railway," has been constructed by the Schroeder Mills and Timber Company. Milwaukee, Wis., and the firm of Lauder, Spears & Howland, Toronto, to operate between Pakesley River. The railroad is 10½ miles long, standard gauge, with 50-pound rails. Station on the C.P.R., and Lost Channel, on Kawigamog Lake, on the Pickerel The Schroeder Comany and Lauder, Spears & Howland will use the road for transportation of men and supplies, and Lauder Spears & Howland will also use it for delivering to the C.P.R., at Pakesley, the cut of their new mill, which is located at the western end of Lost Channel.

Eastern Canada

The Pulpwood Supply Company, Montreal, P.Q., has been registered. I. Raymond is interested.

A despatch from St. John, N.B., states that the Fraser Companies, Ltd., have purchased 280.000 acres of timber land in Nova Scotia from the Halifax Lumber Company.

La Compagnie des Forestiers de Peribonka has been formed, with a capital of $15,000, to cut and manufacture lumber, carry on a general lumber business, to deal in forests, land, waterways, mills, and storages and to carry on the floating of logs, etc. The incorporators include Messrs. A. Simard, forestry contractor; J. Saulnier forestry contractor and E. Simard lumber culler, of Quebec. The principal place of business is La Malbaie P.Q.

The capital of La Compagnie Couture, Rheault, Ltd., is $99,000. The main objects of the company are to carry on a lumbering business and the trade of lumber, paper, and pulpwood, including manufacturing. Also to acquire or construct power plants in the districts of Rimouski, Gaspe, Chicoutimi, and Saguenay. Messrs. H. Couture, lumber merchant, of Mont Joli; C. Champoux, lumber merchant, Restigouche, P.Q., and D. C. & A. Champoux, lumber merchants, Campbellton, N.B., are interested. The head office is at Mont Joli, County of Matane, P.Q.

The Riordon Pulp and Paper Company, who have acquired a site near Temiskaming, on the Upper Ottawa, for the building of a large sulphite mill and paper plant, are developing a model town adjacent to the mill site for the accommodation of the employees of the company and others. Houses will be built from designs prepared by leading architcts. Areas are being set aside for open spaces, social centres, churches, schools, etc., in advance. The main approach will be by a street eighty feet wide, passing through a square, on which the stores and public buildings will be erected. It is proposed to make the town a model of its kind, as it is realized by the company that agreeable housing and favorable social conditions are of vital importance in increasing the efficiency of the workers.

Western Canada

The Empire Lumber Company, Ltd., have opened a branch at Prussia, Sask.

The Qualicum Saw Mill Company, Ltd., has been incorporated, with capital

stock of $25,000 and head office at Vancouver, B.C. to carry on business as loggers, timber, and lumber merchants sawmill and shingle mill proprietors, etc.

The Thurston-Flavelle Lumber Company, Ltd., Port Moody, B.C., have obtained a charter.

Plaxin & Veregin, lumber dealers, Buchanan, Sask., have been succeeded by Plaxin Brothers.

The Leitch McLean Lumber Company, Ltd., have moved from Saskatoon, Sask., to Winnipeg, Man.

The Inlet Timber Company, Ltd., has been incorporated, with head office at Vancouver B.C., and capital stock of $35,000, to carry on business as loggers, timber merchants, sawmill proprietors, and general lumbermen.

The Hanbury lumber mill on False Creek, Vancouver, B.C., sustained considerable damage by fire recently. The fire started shortly after midnight in one of the dry kilns.

Between 2,500 and 3,000 cords of bolts were destroyed by a bush fire near the shingle cutters' camp of the Robert McNair Lumber Company on the Coquitlam River, B.C., recently.

Roray & Yeaman timber factors, Vancouver, B.C., have closed a sale of five sections of spruce timber on Queen Charlotte's Island to George Johnston, trustee, of the T. A. Kelley Logging and Lumber Company, Ltd., Vancouver, which concern will log the timber and tow it to mills in that city and vicinity.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 15th day of October, 1917, for the purchase of License X1076 to cut 1,024,000 feet of fir, cedar, and hemlock and 5,120 lineal feet of poles on an area adjoining S. T. L. 1484P, Ramsay Arm, Range 1, Coast District. Two years will be allowed for the removal of the timber.

Cedars, Ltd., are establishing a logging camp and a lumber and shingle mill combined on Lynn Creek, north of North Vancouver, B.C., and have purchased limits totaling 2,000 acres. The timber is estimated to contain 100,000,000 feet of cedar and 80,000,000 feet of hemlock and larch. The sale was made by Roray & Yeaman, timber factors of Vancouver.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 11th day of October, 1917, for the purchase of License X1068 to cut 1,307,200 feet of spruce, cedar, and hemlock from an area situated in Atli Inlet, Lyell Island, Queen Charlotte Islands District. Three years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 11th day of October, 1917, for the purchase of License X1067 to cut 2,226,000 feet of spruce, cedar, and hemlock on an area situated on Richardson Inlet, Lyell Island, Queen Charlotte Islands District. Three years will be allowed for the removal of the timber.

The Northern Mills and Timber Company has been incorporated, with head office at Vancouver, B.C., and capital stock of $20,000, to carry on business as builders and operators of sawmills. shingle mills, and planing mills, and to manufacture and deal in rough and dressed lumber, shingles, mouldings, and finishing lumber of all kinds.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 11th day of October, 1917, for the purchase of License X1069 to cut 1,499,300 feet of spruce, cedar, and hemlock from an area situated in Atli Inlet, Lyell Island, Queen Charlotte Islands District. Three years will be allowed for the removal of the timber.

The Whalen Pulp and Paper Company, which is establishing a large industrial plant on Vancouver Island at the new town of Port Alice, near the head of the southeast arm of Quatsino Sound, has decided to make itself as independent as possible of the transportation companies by building its own vessels. The company will lay down two keels at a time, and will continue building ships until it has enough to handle its export trade. The vessels are to be approximately 2,500 tons and of standard type similar to those building in Victora and North Vancouver for the Canada West Navigation Company. It is expected that when the plant is in full operation the company will give employment to 1,000 men.

Lieut. William M. Calder, of Lachute, has been promoted to the rank of Captain and Quartermaster in the Canadian Forestry Service now in France. He joined as a private in April, 1915, and after considerable service in the trenches returned to this country owing to illness. He then joined, as a Lieutenant, the Forestry Battalion raised by Lieut.-Col. J. B. White, with whom he again went overseas.

The Pacific Lumber Inspection Bureau, Inc., Seattle, Wash., have published a 1917 edition of their domestic standard schedule of prices, dimensions. grading rules, etc., of Douglas fir, Western hemlock, Sitka spruce, Western red cedar, and Port Orford cedar lumber. This list is known as their "Domestic Seven" list. They have also issued a new export standard schedule of prices, dimensions, grading rules, etc., of Douglas fir, Western hemlock, and Sitka spruce lumber, which is know as their "Export H" list. These lists include much valuable information for those who are engaged in the domestic and export lumber trades of the Pacific Coast.

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Limited
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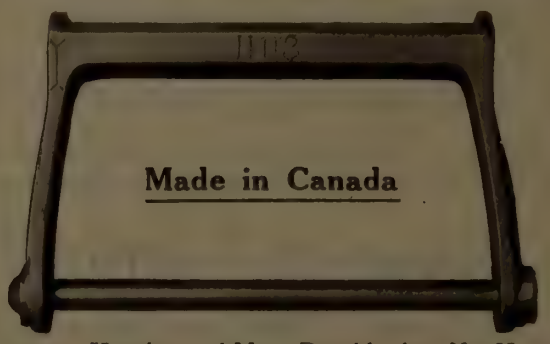

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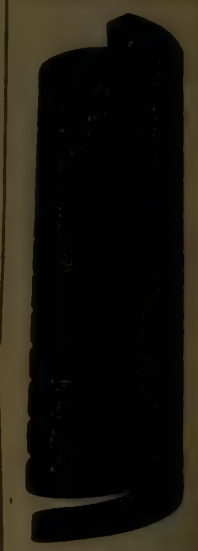
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(Guaranteed Chemically Pure.)

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30 lb. Tins (4 to case) ..... 13c. per lb.
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8 lb Tins (6 to case) ..... 14½c. per lb.

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Dry Milk (Barrels 200 lbs. each) ... $47.00 per bbl.
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Hotel Size (2 lb. tins, 24 to case) ..... $6.15 per case
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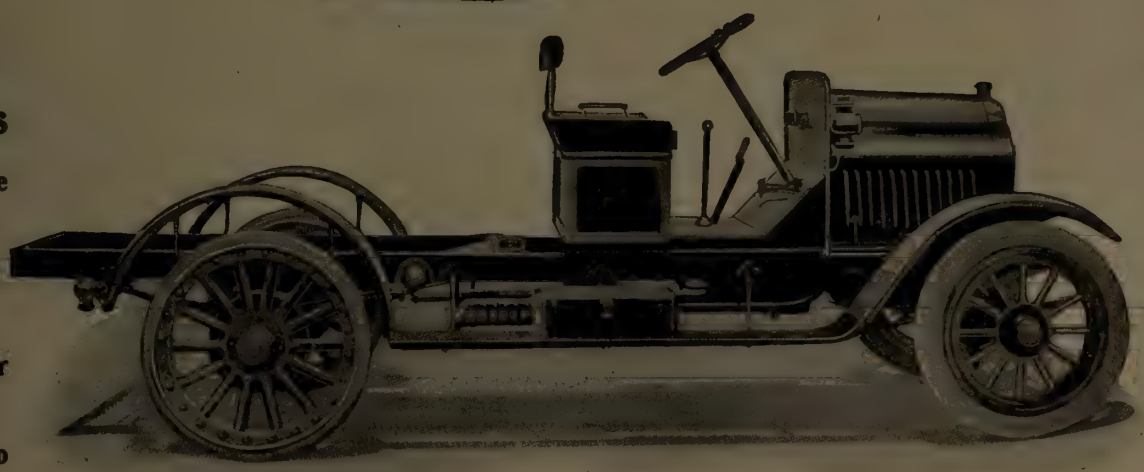

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"16"—2 tons Worm Drive
"17"—3½ tons Worm Drive
"18"—5 tons Worm or Chain Drive to order

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"Brazel Patent" SNOW PLOWS

Known in every Camp from the Atlantic to the Pacific as the most satisfactory Snow Plow made.

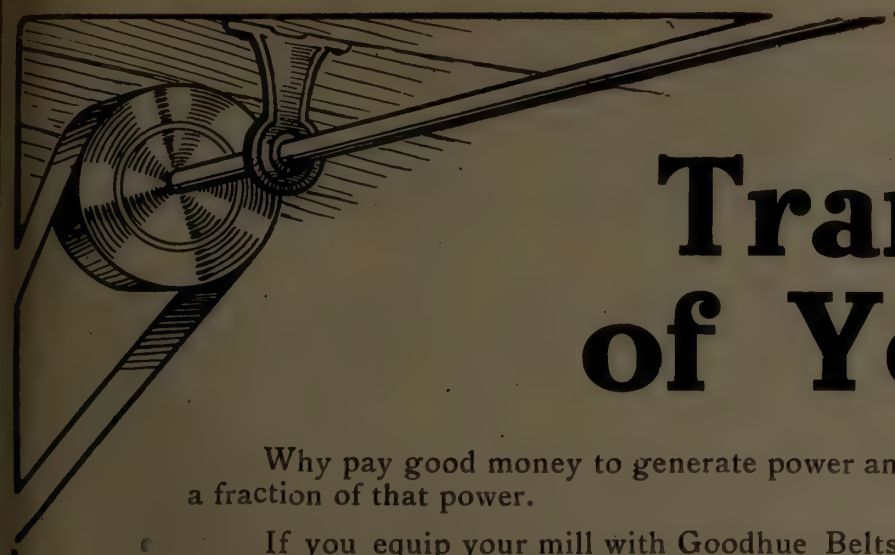
Combination Model, Lumberman's Snow Plow, can be used either with or without Rut Cutter.

One man to operate. Adjusting wheels close together make change for light or heavy work in an instant. Wings placed to throw snow 9 ft. wider than sleigh track or narrower if desired. Height of mouldboards prevent snow falling back on track. BRAZEL PLOWS cut 6 in. wider than logging sleighs, roll snow outside track and away from roadway. Cut off knolls, fill up holes and leave a perfectly level road. Cut off dirt and manure heaps from an ice road, leaving a clean roadbed. Roll up and push entirely away from the road, 12 inches of loose snow each time the plow passes over.

THE BATEMAN-WILKINSON CO., LIMITED
300 Symington Ave., Toronto, Can.

Successors to the WILKINSON PLOW CO., LIMITED
Catalogue and prices on application.

TORONTO, CANADA



Transmit 100% of Your Power

Why pay good money to generate power and then employ a poor belt that will only transmit a fraction of that power.

If you equip your mill with Goodhue Belts you can transmit 100% of the power generated.

Goodhue Belts stretch 15% to 25% less than other belts and have just the right amount of "cling" on the pulley.

Write us for particulars and prices

YOU CAN DO IT WITH A— GOODHUE BELT

Winnipeg Agents: Bissett & Webb, Limited, 151 Notre Dame Ave. East, Winnipeg, Man.
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DANVILLE, QUEBEC CANADA.

YOU NEED "LITTLE DAVID" FOR WOODEN SHIPBUILDING

— MORE WORK AND LESS WORRY —

The "Little David" Wood Borer is the "Shipbuilders' Wood Boring Machine," because it is light, powerful and speedy, and above all, simple and durable.

It is made in three sizes, the smallest boring holes in wood 1" diameter and under, and the largest, 4" diameter and under.

All sizes are reversible, and the cases are of aluminum with steel bushed cylinders. This explains why the largest size is about ten pounds lighter than any other wood borer of equal capacity.

We have other labor-savers for wooden ship work, such as the CC-101 Drift Bolt Driver, Pneumatic Hammers adapted for trenail driving, and Pneumatic Tools for horsing oakum, etc.

Our nearest branch will be glad to give you full information, and to send bulletins, etc., at any time.

CANADIAN INGERSOLL-RAND CO., Limited

COMMERCIAL UNION BUILDING, MONTREAL. CANADA

Works : SHERBROOKE, Que.

Branches: Sydney Toronto Cobalt Timmins Winnipeg Nelson Vancouver

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.
Car Lots

White Pine:

1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	62 00	64 00
2-in. No. 1 cuts and better	64 00	66 00
1½-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	52 00	54 00
4/4 No. 2 and 3 cuts		33 00
5/4 and 6/4 No. 2 and 3 cuts	42 00	44 00
8/4 No. 2 and 3 cuts	44 00	46 00
1-in. Good Shorts		45 00
1 x 4 and 5 com. and dressing	37 00	38 00
1 x 6 common and dressing	39 00	40 00
1 x 8 common and dressing	40 00	41 00
1 x 10 common and dressing	44 00	46 00
1 x 12 common and dressing	48 00	50 00
1 x 10 and 12 mill cull stocks	33 00	35 00
1-in. mill cull sidings	30 00	32 00
5/4 and 6/4 x 4 m.r., m.c. out.	38 00	40 00
5/4 and 6/4 x 5 m.r., m.c. out.	38 00	40 00
5/4 and 6/4 x 6 m.r., m.c. out.	39 00	41 00
5/4 and 6/4 x 8 m.r., m.c. out.	39 00	41 00
5/4 and 6/4 x 10 m.r., m.c. out.	45 00	47 00
5/4 and 6/4 x 12 m.r., m.c. out.	48 00	50 00
2 x 10 common	37 00	39 00
2 and 3 x 12 common	39 00	41 00
1 x 8 inch box and common	35 00	37 00
1 x 10 inch box and common	36 00	38 00
1 x 12 inch box and common	38 00	40 00
1-in. mill run sidings	40 00	42 00
1-in. mill run shorts	33 00	35 00
1-in. mill run Norway	31 00	32 00
2-in. mill run Norway	33 00	35 00
Norway, c. and cf. 1-in.	40 00	42 00
Norway, c. and cf. 1½-in.	42 00	44 00
Norway, c. and cf. 2-in.	42 00	44 00
Spruce mill run 1-in. and 2-in.	33 00	35 00
Spruce mill culls	28 00	30 00

Hemlock, No. 1:

1 x 4 and 5-in. x 9 to 16 ft.		27 00
1 x 6-in. x 9 to 16 ft.	30 00	31 00
1 x 8-in. x 9 to 16 ft.	32 00	33 00
1 x 10 and 12 in. x 9 to 16 ft.	32 00	33 00
1 x 7, 9 and 11 in. x 9 to 16 ft.	30 00	31 00
1 in. No. 2, 6-ft. to 16-ft.	24 00	25 00
2 x 4 to 12, 10 and 16 ft.	30 00	31 00
2 x 4 to 12 ft., 12 and 14 ft.	30 00	31 00
2 x 4 to 12 in., 18 ft.	32 00	33 00
2 x 4 to 12 in., 20 ft.	33 00	34 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	24 00	25 00
Clear in. B.C. cedar, kiln dried	50 00	55 00

Douglas Fir:

Dimension Timber up to 32 feet:

8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	43 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16	44 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.	44 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.	45 00
10x20, 18x20, up to 32 ft.	45 50
6x18, 8x18, up to 32 ft.	45 50
6x20, 8x20, up to 32 ft.	45 00

Timber in lengths over 32 feet subject to negotiation.

Fir flooring, 1 x 3, edge grain	43 50
Fir flooring, 1 x 4, edge grain	46 50
Fir flooring, 1 x 4, flat grain	39 50
No. 1 and 2, 1-in. clear Fir rough	50 75
No. 1 and 2, 1¼ and 1½ in., clear Fir rough	56 00
No. 1 and 2, 2-in. clear Fir rough	52 00
1½-in. No. 1, 4-ft. pine lath.	6 00
1½-in. No. 2 4-ft. lath	5 70
1½-in. 32-in. pine	2 75
1½-in. No. 1 4-ft. hemlock lath.	4 50
1½-in. mill run hemlock lath.	4 25
XX B. C. cedar shingles	3 05
XXX 6 butts to 2-in.	4 20
XXXXX	4 75

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2 in.		75 00
Ash, white, No. 1 common		50 00
Ash, brown, 1sts and 2nds, 4/4		60 00
Ash, brown, com. and bet.		50 00
Ash, brown, 1sts and 2nds, 6/4 and 8/4		70 00
Birch, 1st and 2nds, 4/4		58 00
Birch, No. 1 com. and bet., 4/4		47 00
Birch, 1st and 2nds, 6/4 and 8/4		65 00
Birch, 1st & 2nds, 10/4 and 12/4		78 00
Birch, 1st and 2nds, 16/4		85 00
Basswood, 1sts and 2nds, 4/4		53 00
Basswood, No. 1 com. and bet., 4/4	45 00	47 00
Basswood, No. 2 and 3 common		28 00
Basswood, 6/4 and 8/4, 1sts and 2nds	58 00	60 00
Basswood, 6/4 and 8/4, com. and bet.		53 00
Basswood, 4/4, No. 2 com. and bet.		42 00
Soft elm, 1sts and 2nds, 4/4		48 00
Soft Elm, No. 1 com. and bet., 4/4		43 00
Soft Elm, No. 2 and 3 common		20 00
Soft Elm, 6/4 and 8/4, 1 and 2		60 00
Rock Elm, 1sts and 2nds, 6/4 and 8/4		65 00
Rock Elm, No. 2 com. and bet., 6/4 and 8/4		45 00
Soft Maple, 1sts and 2nds, 4/4		48 00
Soft Maple, com. and bet., 4/4		38 00
Soft Maple, 6/4 and 8/4, 1sts and 2nds		55 00
Hard Maple, 1sts and 2nds, 4/4		47 00
Hard Maple, com. and bet., 4/4		42 00
Hard Maple, 12/4, 1sts and 2nds	65 00	70 00
Hard Maple, 16/4, 1sts and 2nds	85 00	90 00
Red Oak, plain, 1sts and 2nds, 4/4		64 50
Red Oak, plain, No. 1 com., 4/4		44 50
Red Oak, plain, No. 2 com., 4/4		33 50
Red Oak, plain, 1sts and 2nds, 6/4 and 8/4		72 00
Red Oak, plain, 1sts and 2nds, 12/4 and 16/4	90 00	95 00
White Oak, plain, 1sts and 2nds, 4/4		64 50
White Oak, plain, No. 1 com., 4/4		44 50
White Oak, plain, No. 2 com., 4/4		33 50
Red and White Oak, plain, 1sts and 2nds, 5/4 and 6/4	65 00	68 00
Red and White Oak, plain, No. 1 com., 5/4 and 6/4		48 00
Red and White Oak, plain, No. 2 com., 5/4 and 6/4		35 00
Red and White Oak, plain, 1sts and 2nds, 8/4		70 00
Red and White Oak, plain, No. 1 com., 8/4		50 00
White Oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00	85 00
White Oak, ¼ cut, 1sts and 2nds, 4/4		89 00
White Oak, ¼ cut, 5/4 and 6/4 1sts and 2nds		92 00
White Oak, ¼ cut, No. 1 com.		57 00
Hickory, 1sts and 2nds, 4/4		72 00
Hickory, 6/4, 1sts and 2nds		80 00
Hickory, 8/4, 1sts and 2nds		85 00

OTTAWA, ONT.
Manufacturers' Prices

Pine good sidings:

1-in. x 7-in. and up	$60 00	70 00
1¼-in. and 1½-in. x 8-in. & up	70 00	75 00
2-in. x 7-in, and up	72 00	76 00
No. 2 cuts 2 x 8-in. and up	45 00	50 00

Pine good strips:

1-in.	45 00	48 00
1¼-in. and 1½-in.	55 00	56 00
2-in.	56 00	57 00

Pine good shorts:

1-in. x 7-in. and up	45 00	50 00
1-in. x 4-in. to 6-in.	32 00	36 00
1¼-in. and 1½-in.	53 00	55 00
2-in.	54 00	56 00
7-in. to 9-in. A sidings	30 00	34 00
Pine, No. 1 dressing sidings	42 00	47 00
Pine, No. 1 dressing strips	40 00	43 00
Pine, No. 1 dressing shorts		36 00
Pine, 1-in. x 4-in. s.c. strips		36 00
Pine, 1-in. x 5-in. s.c. strips		37 00
Pine, 1-in. x 6-in. s.c. strips		38 00
Pine, 1-in. x 7-in. s.c. strips		38 00
Pine, 1 x 8-in. s.c., 12 to 16 ft.		39 00
Pine, 1-in. x 10-in. M.R.		44 00
Pine, s.c. sidings, 1½ and 2-in.	30 00	42 00
Pine, s.c. strips 1-in.		35 00
1¼, 1½ and 2-in.	36 00	37 00
Pine, s.c. shorts, 1 x 4 to 6 in.	30 00	31 00
Pine, s.c. and bet., shorts 1 x 5		32 00
Pine, s.c. and bet., shorts, 1 x 6		33 00
Pine, s.c. shorts, 6'-11', 1"x 10"		36 00

Pine box boards:

1"x 4" and up, 6'-11'		26 00
1"x 3", 12'-16'		26 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up		28 00
and up, 6-ft. to 11-ft.		26 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.		25 00
O. culls r & w p	18 00	20 00

Red Pine, log run:

mill culls out, 1-in.	28 00	30 00
mill culls out, 1¼-in.	32 00	33 00
mill culls out, 1½-in.	32 00	33 00
mill culls out, 2-in.	34 00	36 00
mill culls, white pine, 1"x 7" and up		31 00

Mill run Spruce:

1"x 4" and up, 6' 11'	24 00	25 00
1"x 4" and up, 12'-16'		30 00
1"x 9"-10" and up, 12'-16'		36 00
1¼"x 7" 8-9" and up, 12'-16'		35 00
1¼"x 10" and up, 12'-16'		36 00
1½" & 2"x12" and up, 12'-16'		40 00
Spruce, 1-in. clear (fine dressing and B)		37 00
Hemlock, 1-in. cull	18 00	20 00
Hemlock, 1-in. log run	23 00	24 00
Hemlock, 2x4, 6, 8, 10, 12/16'	26 00	28 00
Tamarac	24 00	26 00
Basswood, log run, dead culls out	30 00	40 00
Basswood, log run, mill culls out	26 00	28 00
Birch, log run	30 00	32 00
Soft Elm, common and better, 1, 1½, 2 in.	25 00	30 00
Ash, black, log run	32 00	40 00
1 x 10 No. 1 barn	40 00	45 00
1 x 10 No. 2 barn	38 00	40 00
1 x 8 and 9 No. 2 barn		38 00

Lath per M:

No. 1 white pine, 1½-in. x 4-ft.	5 50	5 75
No. 2 white pine		5 25
Mill run white pine		5 50
Spruce, mill run 1½-in.		5 00
Red pine, mill run		4 75
Hemlock, mill run		4 00
32-in. lath		2 25

White Cedar Shingles:

xxxx, 18-in.		5 00
Clear butt, 18-in.		4 00
18-in. xx		2 75
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

cts.

White Pine

First class Ottawa waney, 18-in. average, according to lineal.	75	80

Oak

According to average and quality	65	75

Elm

According to average and quality, 40 to 45 feet	80	85
According to average and quality, 30 to 35 feet	55	65

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Birch Planks

1 to 4 in.	20 00	25 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$74 00
1 in., 8 in. and up wide	83 00
1¼ and 1½ in. and up wide	86 00
2 in. and up wide	88 00

Cuts and Better

4/4 x 8 and up No. 1 and better	58 00
6/4 x 8 and up No. 1 and better	70 00
8/4 x 8 and up No. 1 and better	72 00
6/4 x 6 and up No. 2 and better	61 00
8/4 x 6 and up No. 2 and better	63 00
6/4 x 6 and up No. 3 and better	55 00
8/4 x 6 and up No. 3 and better	59 00

No. 1 Cuts

1 in., 8 in. and up wide	50 00
1¼ in., 8 in. and up wide	59 00
1½ in., 8 in. and up wide	61 00
2 in., 8 in. and up wide	64 00
2½ and 3, 8 in. and up wide	84 00
4 in., 8 in. and up wide	90 00

No. 2 Cuts

1 in., 6 in. and up wide	36 00
1¼ in., 6 in. and up wide	47 00
1½ in., 6 in. and up wide	48 00
2 in., 6 in. and up wide	49 00
2½, 3 and 4 in., 6 in. and up wide	68 00

No. 3 Cuts

1 in., 6-in. and up wide		30 00
1¼ and 1½ in., 6-in. and up wide		35 00
2 in., 6-in. and up wide		38 00
2½, 3 and 4-in., 6-in. and up wide	45 00	48 00

Common and Dressing Mill Run

1-in. x 4 in.	32 00
1-in. x 5-in.	32 00
1-in. x 6-in.	34 00
1-in. x 8-in.	34 00
1-in. x 10-in.	36 00
1-in. x 12-in.	38 00
1-in. x 13-in. and up	38 00
1¼, 1½ and 2 in.	40 00

No. 1 Barn

1 inch	38 00	48 00
1¼, 1½ and 2-in.	45 00	51 00
2½ and 3-in.		55 00
4 inch		68 00

No. 2 Barn

1 inch	35 00	42 00
1¼, 1½ and 2-in.	38 00	44 00
2½ and 3-in.		46 00

No. 3 Barn

1 inch	32 00	36 00
No. 1, 1, 1¼, 1½, 2-in.		34 00

Box

No. 1, 1, 1¼, 1½, 2-in.	29 00	31 00
No. 2, 1¼, 1½, 2-in.		26 00

Mill Culls

Mill run culls, 1-in.		27 00
1, 1¼, 1½ and 2-in.		28 00
No. 2	24 00	26 00

Lath

No. 1, 32-in. pine	2 00
No. 2, 48-in. pine	5 00
No. 1, 48-in. pine	5 50
No. 3, 48-in. pine	4 50
Hemlock Lath, 48-in.	4 50

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac.

Dimension. S. 1 S. and 1 E.

	6 ft.	8 ft.	10 ft.	14 & 16 ft.
2 x 4, 6, 8	16 00	19 00	22 50	23 50
2 x 10	20 00	20 50	23 50	24 50
2 x 12	20 00	21 00	25 50	25 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH.
Mountain Stock.

Dimension.

2 x 4, 8, 12, 14, 16	23 50
2 x 4, 10, 18, 20	25 50
2 x 6, 8 to 16	23 50
2 x 8, 8 to 16	23 50
2 x 4-6 and 8 in.; 24, 26, 28, 30, 32 ft.	31 50
2 x 10 and 2 x 12; 8-16 ft.	28 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	30 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	32 50

No. 1 Common Boards.

4 inch	23 00
6 inch	25 50
8, 10, 12 inch	27 50
Mixed widths	26 50

Flooring.

4 or 6 inch No. 1	37 00
4 or 6 inch No. 2	32 00
4 or 6 inch No. 3	26 00

Shiplap—Finished.

6 inch	24 00
8, 10 and 12 inch	25 00

Siding.

6 inch No. 1	37 00
6 inch No. 2	35 00
6 inch No. 3	27 00

Lath.

No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed)	4 50

PINE—ROUGH TIMBER.

3 x 6 in.; 8 to 16 ft.	29 10
3 x 8 in.; 8 to 16 ft.	28 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	29 00
4 x 10 to 10 x 10, 8 x 8, 6x 12 in. up to 32 ft.	31 00

BRITISH COLUMBIA COAST FIR.
Dimension S1S and E.

2 x 4 in.; 6 and 8 ft.	22 50
2 x 4 in.; 12 and 14 ft.	23 50
2 x 4 in.; 10 and 16 ft.	24 50
2 x 4 in.; 18 and 24 ft.	25 50
2 x 4 in.; 22 and 24 ft.	26 50
2 x 4 in.; 26 to 32 ft.	28 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	25 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	27 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	28 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	30 00
2 x 14 in.; 10 to 16 ft.	30 00
2 x 14 in.; 18 and 20 ft.	32 00
2 x 14 in.; 22 and 24 ft.	33 00
2 x 14 in.; 26 to 32 ft.	35 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	26 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	27 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	28 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	29 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	31 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft.	29 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft.	30 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft.	30 50

FLOORING.

Nos. 1 and 2, 1 x 3 in., E. G.	37 00
Nos 1 and 2, 1 x 4 in., E. G.	40 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in. F. G.	30 00
Nos. 1 and 2, 1 x 6 in., F G.	35 00
No. 3, 1 x 4 in.	28 00
No. 3, 1 x 6 in.	33 00

No. 3 Edge grain $3 per M. extra.

SHIPLAP.

B. C. fir, 6 in.	23 50
B. C. fir, 8, 10, 12 in.; 8 to 16 ft.	24 50
No. 2 shiplap, 6 in.	23 50
No. 2 shiplap, 8, 10 and 12 in.	24 50

FIR, COMMON BOARDS, S1S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	22 00
Common boards, 8 to 12 in.	23 00
No. 2 mixed widths	18 00
No. 2 boards, 8 to 12 in.	19 00

SHINGLES.

XXX B. C. cedar	3 05

LATH.

Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's	4 50
Cedar lath, ⅜ x 1⅜ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers, 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00
No. 1 Moulding 8/4	62 00

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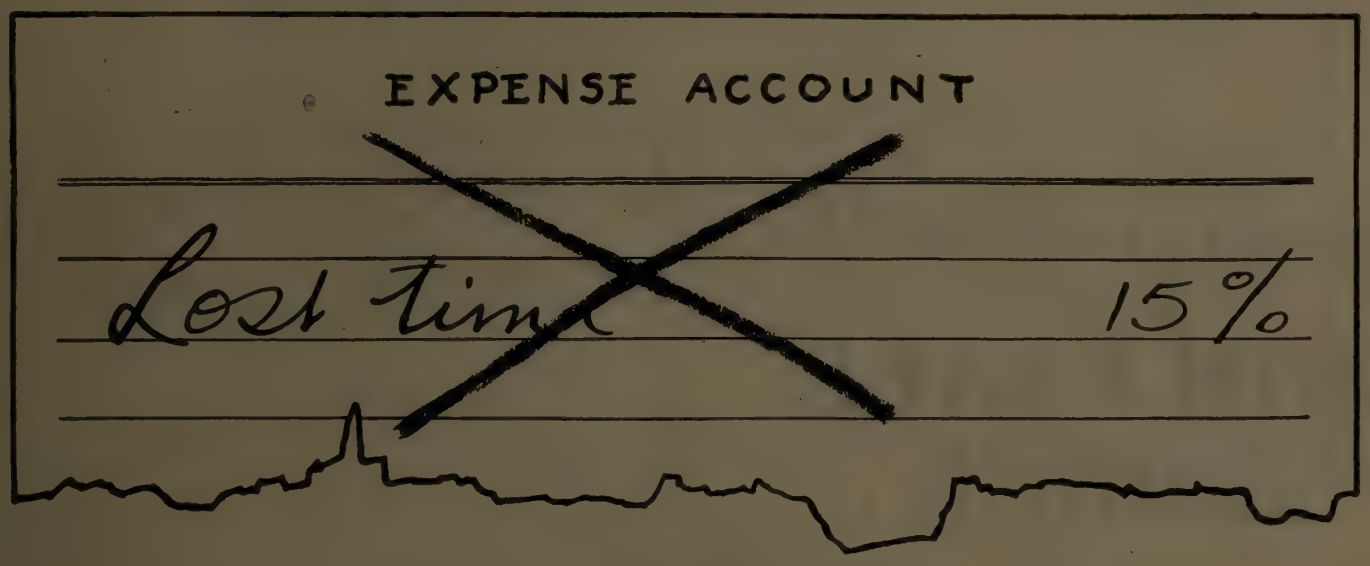
Cross this big item off your expense account



Men, Minutes, Money—Vital to your Success—if they *all* produce *all* they can

The present is no time for lax methods in Canadian industry. You need all possible from your plant, your equipment, and from the TIME of your employees.

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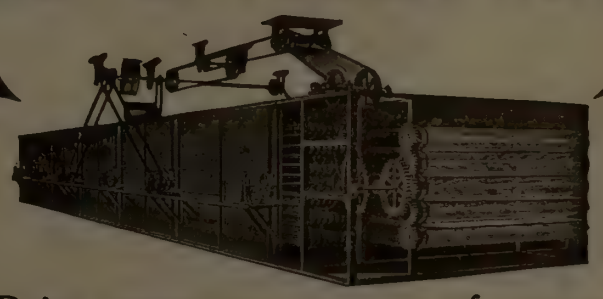

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Harris Tie & Timber Company
Long Lumber Company
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International Time Recording Co.

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Cant & Kemp
Farnworth & Jardine
Hillas & Company, W. N.
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McInnis, A. D.
Sewall, James W.

TIMBER LANDS
Dept. of Lands and Forests
Lacey Co., Jas. D.

TOOL STEEL
Canadian B. K. Morton Company

TOWING WINCHES
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Can. Bond Hanger & Coupling Co.
Canadian Link-Belt Company, Ltd.
Dodge Manufacturing Company
Jeffrey Manufacturing Company
Waterous Engine Works Company

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TRIMMERS
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West & Peachey

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Canadian Western Lumber Company
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Philadelphia Textile Mach. Co.

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STERLING STEEL SAWS

Give the results you are looking for. They run easier, cut faster and are guaranteed to hold their edge longer than any other make of saw.

Each one is an investment that will bring large returns.

Try them and see—you'll not be disappointed.

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Government Contractors and the largest Manufacturers and Dealers in Canada of

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Fits Any Saw Mandrel

A Huther Bros. Dado Head consists of two outside cutters and enough inside cutters to make the required cut. This Head will cut perfect grooves, with or across grain, any width. It is an easy Head to keep in perfect condition, has a simple quick adjustment, and may be enlarged any time after purchase. Sent on approval and if not satisfactory return at our expense.

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Logging locomotives face different conditions. They must work day after day in the hardest service, and often in localities where repairs cannot be made without great inconvenience. That is why we build our logging locomotives from interchangeable stock parts. With this system every part must fit every other locomotive of the same size and design, and long delays waiting for duplicate parts are avoided. Interchangeable parts kept on hand at our Works for prompt shipment

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DOMINION EXPRESS BUILDING, MONTREAL, CANADA.

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. **Get Catalog "H."**

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The Peter Hay Knife Co., Limited

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MANUFACTURING WOODWORKING

Machine Knives, Circular Cutters and Mortise Chisel

Steam Log Kickers

The illustration shows our Standard Double Deck Steam Log Kicker which we manufacture with cylinders 8 in., 10 in., and 12 in. bore. This kicker is made for either single or double deck mills. The bottom head of the cylinder is cast solid, eliminating the necessity of taking the machine apart for packing. The joint between the valve case and cylinder is a "ground joint," which is perfectly steam tight and requires no packing.

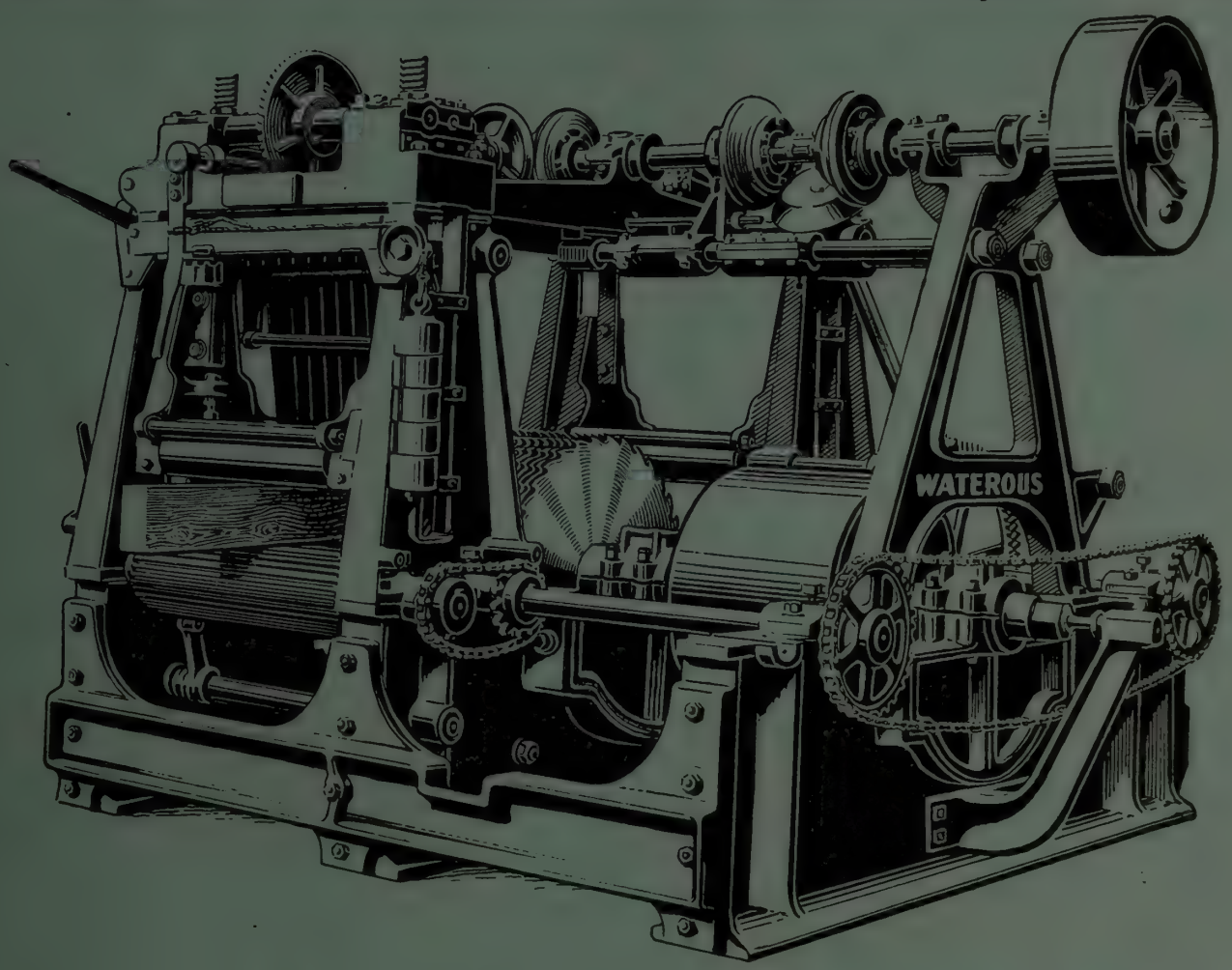
Catalogue on request.

The E. Long Mfg. Co., Ltd.

Orillia, Ont.

This mark on your sawmill machinery is an indication that your lumber manufacturing equipment is the best and most economical money can buy.

The 1917 Model Kendall Circular Gang



A New Machine That IS New

This illustration shows the latest development of the Kendall Circular Gang.

It takes cants from 4 in. to 12 in. thickness at the rate of from 2500 to 3000 a day, will turn them into lumber, perfect in finish and cut evenly from end to end.

Big capacity on small logs, and lumber cut better than is possible on Band Saw, Circular or Vertical Gang, distinguish this machine.

It meets the demand for a machine that will turn small logs into merchantable lumber economically. Those already in use have proven their worth.

While all good points of previous models are retained, such weaknesses that use has made apparent have been eliminated. The new features and better construction of this 1917 Kendall Gang meant an appreciable increase in capacity, in nice cutting ability, and in safety, convenience and sturdiness.

This latest development of the Kendall Gang patents is built in a shop that has specialized in high class machinery construction—that has built machinery for Canadian sawmills for more than fifty years. Our reputation is a guarantee that this New Model Kendall Gang is built as it should be.

When you investigate the Circular Gang question see that you get facts and figures of the "WATEROUS KENDALL GANG"—the New Machine that IS New.

The Waterous Engine Works Co., Limited

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$5,000,000.00

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Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. Price **30c per lb., Fort William and East; West of Fort William 35c per lb.,** delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

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Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

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The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
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Canada Lumberman & Wood Worker

New **RAILS** Relaying
12 to 80 pounds per yard.

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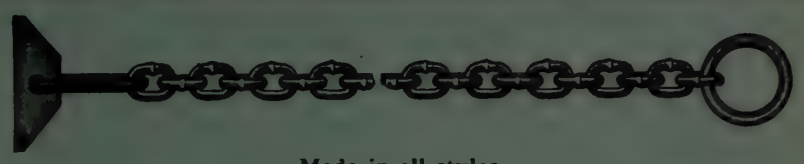

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Made in Canada Write to Fully Guaranteed

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The best belt for sawmills.

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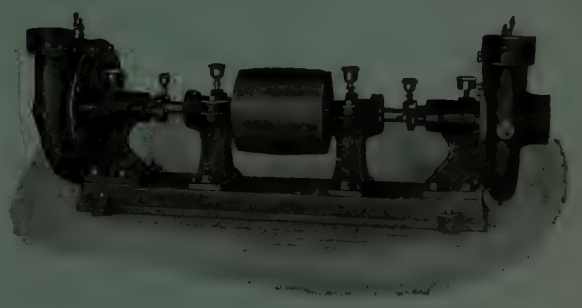
Then send your inquiry to



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Easier hauling with Alligator Brand Harness

Alligator Brand heavy harness is perfectly proportioned and balanced so that your hauling problem is never aggravated by misfit harness. We have been making the best harness in Canada for more than fifty years. Leather, hardware and workmanship in one quality only —the best money can buy.

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Alphabetical Index to Advertisers, Page 54 Classified Directory to Advertisements, Page 60

DUNLOP

BELTING HOSE

SEAL OF QUALITY

PACKING

All of our best experience in belt-making is represented in **"Gibraltar Redspecial"**—a friction face belting for Drives, Rotaries, Edgers, Lath and Shingle Machines, or any kind of Transmission work. No service is too exacting; no condition is too abnormal; no load is too heavy for **"Gibraltar."**

Will not dry nor rot, and is practically immune to stretching, as it is made by a process that automatically eliminates this evil. Its endless fund of toughness and great tenacity make Dunlop **"Gibraltar Redspecial"** the ideal belting; more especially when the latter is constantly exposed to the elements.

What Dunlop **"Sunset"** (red) and **"Admiral"** (blue) Packings have done in the way of giving extra service and reducing packing costs for the big steel companies—or, for that matter, countless industries located throughout the Dominion—they can do for you.

For many years Dunlop Packings have been doing continuous duty in some of Canada's largest mills where abnormal conditions call for superb service—where a packing is subjected to the severest kind of tests—where its ability to do the work efficiently is a known factor from the beginning.

Adequate fire protection is secured only through the use of reliable hose—a line like Dunlop which is always ready for use when necessity arises—that will stand the utmost power and give the greatest wear.

These are two of the main characteristics of **"Dunlop"** Double Jacket, and **"Imperial"** Solid Woven Jacket Fire Hose—two brands that are the pride of the largest fire departments in Canada. They, also, possess straight and smooth waterways, and the weight, grade and texture of the cotton jackets are always right.

We are authorized by the Underwriters' Laboratories, Inc., Chicago, to stamp **Dunlop Underwriters' Mill Fire Hose** (Cotton Rubber Lined) with their label of approval.

Dunlop Tire & Rubber Goods Co., Limited

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BRANCHES: Victoria, Vancouver, Edmonton, Calgary, Saskatoon, Regina, Winnipeg, London, Hamilton, Toronto, Ottawa, Montreal, St. John, Halifax.

M. 22

SPRUCE

1916 SAWING

Merchantable

2 x 4 x 10/16	-	33,368'	2 x 6 x 10/16	-	5,459'
2 x 5	-	22,704'	2 x 7 x 10/16	-	77,272'

1917 SAWING

Merchantable

1 x 3 x 10/16	-	128,360'	2 x 4 x 8/16	-	218,053'
1 x 4 "	-	286,212'	2 x 5 "	-	134,920'
1 x 5 "	-	80,514'	2 x 6 "	-	61,630'
1 x 6 "	-	30,004'	2 x 7 "	-	39,586'
1 x 7 and up	-	19,760'	2 x 8 "	-	16,360'
1 x 3 and up x 6/10		33,613'	2 x 9 and up	-	9,000'

Mill Culls

1 x 3 and up x 6/16 - 47,200' 2 x 4 and up x 6/16 - 62,500' 3 x 6 and up x 6/16 - 118,819'

Merchantable Spruce Lath 1½ x 4'—1,500,000 pieces

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Rough or Dressed

On account of the uncertainty of car and mill supply, we are offering only material that is in transit. We then know that we can deliver these cars when promised.

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Wire us your enquiries.

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Flooring
Ceiling
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Sole representatives of The Victoria Lumber & Manufacturing Company, Ltd., in Eastern Ontario, Quebec and Maritime Provinces.

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Manufacturers of

RED and WHITE PINE

PLANING MILL **DRY KILN**

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

In Good Shipping Condition
Want to Move

AT ARNPRIOR

50,000 1 x 4—12 to 16 ft. Mill Run White Pine Strips
30,000 1 x 5—12 to 16 ft. " " "
30,000 1 x 6—12 to 16 ft. " " "
50,000 1 x 8 and up 12 to 16 No. 1 Mill Cull White Pine
100,000 1 x 12—12 to 16 No. 2 " "

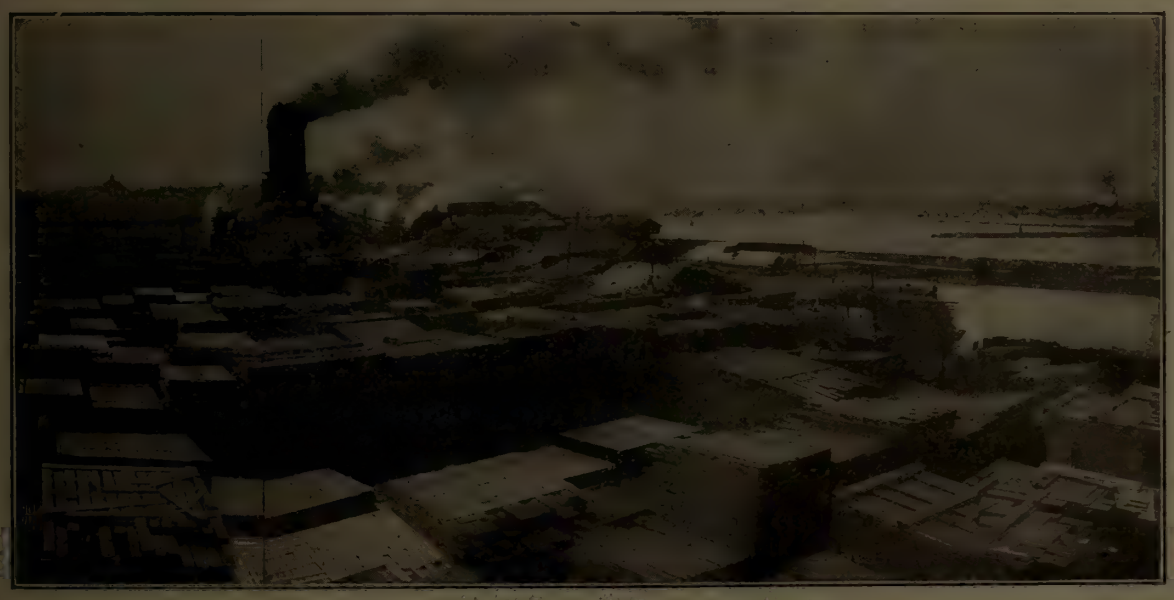
AT CACHE BAY

50,000 1 x 10 and 12—10 to 16 No. 1 Mill Cull White Pine

AT MIDLAND

1 Car 1 x 6—10 to 16 Mill Run White Pine
1 Car 1 x 12— " " "

The Long Lumber Company
Hamilton
Canada



View of Yard and Fir Mill. Daily Capacity 200,000 ft.

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of
British Columbia
FIR and CEDAR

Finish
Flooring
Ceiling
Siding
Mouldings
Siding
Finish
Ceiling
Mouldings
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Vancouver Lumber Co.
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Forest Products

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ROUGH OR DRESSED

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We have almost inexhaustible forests of Spruce and Pine, and our Mill facilities include the latest and most complete equipment. We will be pleased to send you our Monthly Price and Stock List on request.

BATHURST LUMBER CO.

LIMITED

BATHURST, N.B.

BATHURST

Ten Band Mills to Serve You

Mills and Railway Connections

Fredericton, N.B.	Railway connection		C. P. R.
Plaster Rock, N.B.	"	"	C. P. R.
Nelson, N.B.	"	"	I. C. R.
Edmundston, N.B.	"	"	C. P. R. or Temiscouata Ry.
Baker Brook, N.B.	"	"	Temiscouata Ry. and N.T.R.
Glendyne, Que.	"	"	N. T. R.
Escourt, Que.	"	"	N. T. R.
Cabano, Que.	"	"	Temiscouata Ry.
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Watson & Todd Limited
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175/200 M. 5/4x4" up 6/11'

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The illustration shows our Jumbo Planer for dressing big timbers.

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Hardwood Lumber

OUR SPECIALTY
$2\frac{1}{2}$ to 6 in. WHITE OAK
Specially selected for WAGON and IMPLEMENT use.

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50,000,000 Feet Red Cypress

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Best Stock for Factory and Pattern Lumber

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ROSSED SPRUCE PULPWOOD

Full supply of Seasoned Lumber always on hand.

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Standing Timber

in Large or Small Blocks

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Special Prices

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We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the Townships of Falconbridge and Street for small mills.

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Manufacturers of—

Nailing Machines,

Lock Corner Box Machinery,

Box Board Matchers,

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Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

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Spruce — Spruce — Spruce

805,000′ 3 x 4/6″—10/18′ Merchantable
1,100,000′ 3 x 7″— “ “
345,000′ 3 x 8″— “ “
25,000′ 2 x 5″— “ “

1916 SAWING

460,000′ 2 x 6″—10/18′ Merchantable
50,000′ 2 x 7″— “ “
565,000′ 3 x 4″ and up 10/18′—5th Quality

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We offer for immediate shipment—
1″ and 1½″ Dry Basswood

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We offer in Birch End Stock—
1 x 8½″ 1 x 9″ and wider
1 x 6 and 7″ 1½″ to 4″

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50 M. ft. 3x8x10/16' M.R. White Pine
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50 M. ft. 1x10 No. 1 Mill Cull W. Pine
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500 M. ft. 1x4/up Cull Jackpine

Also Hemlock and Lath.

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WHITE PINE, SPRUCE and HEMLOCK LATH

Will contract for entire output and pay spot cash

Send full particulars as to grade, quantity and prices

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Pine and Hardwood

Lumber

Lath and Shingles

North Tonawanda, N.Y.

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When in the market for

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or for

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We have a full line of White Pine and Spruce.

We are ready to contract for Output of mills in any Ontario Soft or Hardwoods.

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We are at all times in the market for dry WHITE PINE, DIMENSION SPRUCE, SPRUCE BOARDS, HEMLOCK BOARDS, LATH and CLAPBOARDS.

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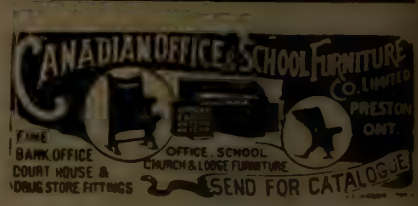

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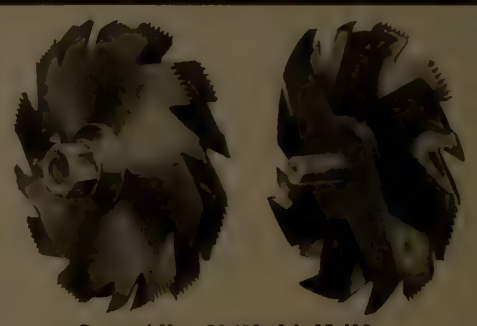

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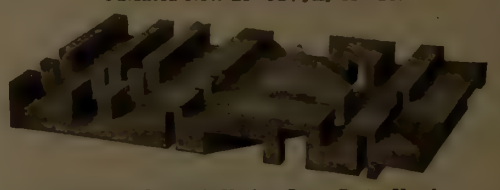

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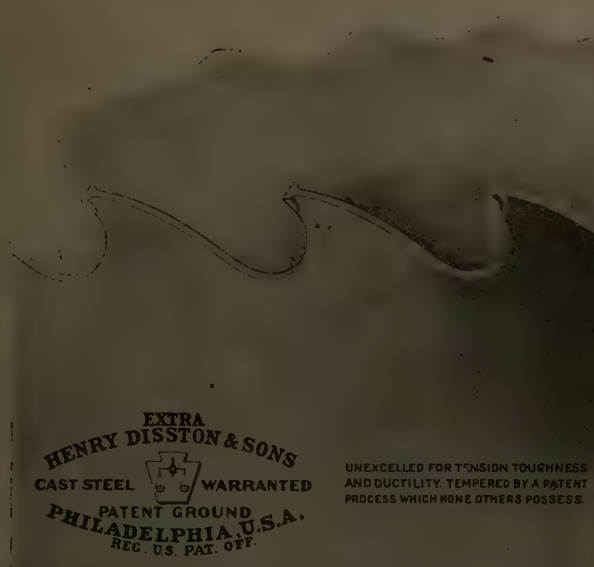

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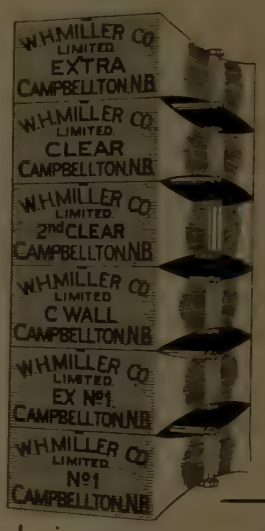

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TERMS OF SUBSCRIPTION

Canada, United States and Great Britain, $2.00 per year, in advance; other foreign countries embraced in the General Postal Union, $3.00.

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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster-General for Canada, for transmission as second-class matter.

Entered as second-class matter July 18th, 1914, at the Postoffice at Buffalo, N.Y., under the Act of Congress of March 3, 1879.

Vol. 37 Toronto, October 15, 1917 No. 20

The Publication of Price Lists

Occasionally the Canada Lumberman receives letters from readers who take exception to the current lumber prices which are published in this journal. These letters, comparatively few, as they are, serve, however, to keep prominently before us the importance of making the published prices as complete and reliable as possible. Sometimes the criticism is made that the prices do not coincide with the reader's ideas. The other chief form of criticism is directed against the policy of publishing prices at all. As to publishing prices, there undoubtedly are two very distinct opinions, though the majority of the readers of the Canada Lumberman unquestionably desire to see prices published. Our wish in this connection is to serve the readers as fully as possible, and the experience of publishing the Canada Lumberman over a long period of years persuades us that the best interests of all sections of the trade are served by the publication of price lists.

The criticism of the actual prices published, however, is quite another matter. It happens occasionally that some manufacturer, wholesaler or retailer, after being unable to obtain the prices quoted in the Canada Lumberman, or to buy lumber at these prices, finds fault with them. Criticisms of this kind we are glad to receive, as they afford an exceptional opportunity for checking up the quotations published. Quite recently a criticism of this nature reached us, and enquiry into the particular prices referred to leads to a belief that sometimes the readers of the Canada Lumberman do not understand as clearly as they should what the prices represent. For this reason some revisions are contemplated in the method of presenting these lists, with a view to making it as plain as possible what the quotations represent. Suggestions from readers of the Canada Lumberman upon this point will be gladly received.

Quoting prices of lumber in the abstract is a difficult matter, but by no means an impracticable one. The aim of anyone who publishes such quotations must be not to give actual prices at which the lumber can be purchased or sold, but rather to present a basis upon which the parties to a deal can reach a reasonable conclusion, after taking into consideration the factors which bear upon their particular case. It is not possible for instance, without seeing a stock of lumber, to say how much it is worth at a given place. There are many elements that will affect the price. The grade of the stock, the percentage of the various widths and lengths, its condition as to dryness, the freight rate to market, etc., must all be considered. For this reason the best that can be done in quoting abstract prices is to give a reasonable range between which the various factors can be balanced off against one another, and such a range must be distinctly understood as relating to a particular point of delivery, so as to eliminate uncertainty regarding freight rates. It is necessary, also, to make such a price list as useful as possible to the whole trade. It has been found by experience in this regard that the most widely understood quotations are those which a wholesaler will make to a retailer, in carload lots. This is the method of quotation most generally in use among lumber trade journals.

In order to furnish a concrete example of the necessity for being as specific as possible, an instance which recently occurred may be recited. An Ontario wholesaler advised the Canada Lumberman a short time ago that the prices quoted in our columns on a certain class of birch were some $8 or $10 too high. Not being content with our own views upon this case, it was submitted to a wholesaler who is probably the most thoroughly posted member of the trade in Canada to-day. Without advising him of the party's name, the facts in the letter were set before him, and his reply, dictated to the Canada Lumberman, was as follows:

"The criticism is made by someone who seems to lose sight of the fact that a large proportion of the manufacturers in Ontario, when quoting f.o.b. Toronto, are computing their prices on a price f.o.b. the mill, plus the freight charges, and are figuring on the basis of the American markets. It is necessary to quote on the American market basis when figuring hardwood prices at Toronto, because the National Hardwood Inspection Rules govern in quite 90 per cent. of the transactions put through. The American quotations are based upon a heavy percentage of long lengths, running from 35 to 50 per cent. of 14 to 16 feet, good widths, well manufactured, and log run for color—that is to say, including all the red in such stock as birch. Bearing this in mind, it will be realized that a price quoted will naturally be the very top price for which Canadian stocks can be sold, with their greater percentage of short lengths.

"It must always be remembered, also, that if a man makes half a dozen different sizes out of a small amount of logs and does not have the lengths required by the market, which is the case with a number of the small manufacturers in Ontario, he must be prepared to take a price just so much lower than that which does meet the requirements of the market. This very fact will account for a difference in price of from $6 to $8. In a good many cases Canadians have the timber to make stock which will compare favorably in grades, lengths, and sizes with the United States market requirements, but they have not made a practice of cutting their logs so as to make the most of them. It would pay the Canadian manufacturers to give far more attention to this point than they do."

It is unfortunate, in this connection, that so much uncertainty prevails in connection with grades of softwoods in Canada and in the United States. The difficulty experienced in quoting prices on softwoods is common to all branches of the trade, and necessitates frequent personal inspection at considerable expense, besides being a fruitful source of disagreement and loss. Several earnest attempts to standardize the grading of softwoods in Canada have been made, but as yet they have been without result. The grades used in the trade to-day are simply a conventional understanding of broad, general subdivisions, and when a transaction is being discussed they have to be supplemented by detailed descriptions of the stock, all of which multiplies greatly the chance of misunderstanding. Those who have stood out against uniform grading of softwoods unfortunately have long-established usage behind them, but the lumber trade has changed greatly in late years, and the growing appreciation of the interests of the consumer may be expected to make the demand for uniform grad-

ing more persistent. Unquestionably the price-quoting problem would be reduced to its simplest terms by a generally recognized system of grading.

The Canada Lumberman wants to serve the lumber trade as efficiently as possible in this matter, and will appreciate suggestions for improving the price lists.

Lumber Prices Always in the Rear

The annual report upon wholesale prices in Canada, published by the Department of Labor for the year 1916, which is now in the press, will shortly appear. The course of wholesale prices in Canada from 1890 to 1916 is shown in diagrams in this report. For a means of comparison the average wholesale prices of all commodities for the year 1890-1899 are placed at 100. In 1890 this average had reached 110. By 1896 it had fallen to about 93, where it continued until the end of 1897. Then an advance commenced, and wholesale prices in Canada have been almost continually increasing from that date onward, with the exception of a slight fall in 1901 and a drop from 126 to 122 in 1908. Since 1908 the average wholesale prices in Canada have been advancing, and in 1916 they reached 182.

With these advances it is interesting to compare the fluctuations in the prices of building materials. A diagram in the report gives building material prices from 1910 to 1916, based upon the average price of 100 during the years 1890 to 1899. In 1910 lumber had reached 160. It advanced gradually through 1910 and 1911, with a drop towards the end of 1911. From 1912 to 1913 the average price of lumber advanced from 165 to 185. With the beginning of 1914 a gradual decline commenced, until in 1915 the price reached 175. Since then it has again advanced, and at the end of 1916 it had reached 185. From the beginning of 1910 to the end of 1916 the advance was only from 160 to 185, whereas the average wholesale prices of all commodities advanced during the same period from 124 to 185.

Miscellaneous building materials commenced the year 1910, at an average price of 105, and fluctuated slightly until the end of 1912. Then an advance commenced which lasted until the middle of 1914, when the price was 115. A slight drop then occurred, and in 1915 and 1916 the price advanced until, at the end of 1916, it reached 182.

The course of average prices for paints and oils shows much more rapid advance than the prices of other building materials. These prices are only available from the beginning of 1912, when the average is placed at 150, as compared with the price of 100 prevailing from 1890 to 1899. Until the end of 1914 the average prices of paints and oils declined, reaching 140 before an upward movement commenced. During 1915 and 1916 the prices have gone rapidly up, and at the end of 1916 they had reached 223.

These statistics illustrate very definitely what lumbermen have been claiming since the commencement of the war, namely, that the prices of lumber have not advanced in anything like the same proportion as the prices of other materials. From the middle of 1914 until the end of 1916 the average prices of lumber showed practically no change. During the same period the average prices of all commodities advanced from 136 to 185. Paints and oils during this priod advanced from 140 to 223,

While the price of lumber was comparatively stationary during these years, the price of practically everything consumed in the production of lumber was advancing steadily, and in many cases rapidly. Take, for instance, the case of food. The average food price at the middle of 1914 was 140. With some rather violent fluctuations, it advanced rapidly, until, at the end of 1916, it had reached 207. Grain and fodder at the middle of 1914 showed an average price of 145. This advanced until it reached 209, early in 1915. In the summer of 1915 the prices of grain and fodder dropped to 160. Then they commenced another advance, and, at the end of 1916, they had reached 238.

Many other interesting comparisons can be drawn from this report, all showing forcibly the way in which lumber has trailed at the rear in the price advance movement. One or two other comparisons are perhaps sufficiently interesting to be made. The average price of steel billets in Canada at the beginning of 1914 was 112. From the beginning of 1915 an advance took place, and by the end of 1916 the price had reached 238. The average price of hides at the middle of 1914 was 210. By the end of 1916 it had reached 418.

These statistics bear out the claim that has been made recently by lumbermen in connection with their advertising, a claim which cannot be too strongly emphasized, namely, that the farmer, or practically any other producer in Canada to-day, can obtain for his product far more lumber than was ever possible before, and that, further, the present is an exceptionally advantageous time for farmers and everyone else to invest their money in building operations.

Is the Freight Car Situation Improving?

It will be rather a pleasant surprise to lumbermen in Canada and the United States this year if it happens that the pessimistic prophesies in regard to a car shortage upon the railroads does not materialize. Of all the years in which car shortages should have developed, according to precedent, this is the one year, because of the entry of the United States into the war, and the vast quantity of war material, to say nothing of large crops and ordinary industrial shipments that have to be carried long distances. Everyone has been expecting a shortage to develop this fall and it is still too early to say whether this expectation will be fulfilled or not, but there are some extremely encouraging signs which lead to a belief that the freight car famine which took place last winter will not be repeated this year. If a car shortage does not occur it will be a striking example of the value of publicity, for the discussion of the subject, both in the press and by business men between one another, must be held accountable for any improvement that has taken place.

During past years the railway companies, by the greatest possible efforts, have never been able to eliminate car shortages when industrial conditions became abnormally active. Apparently they are destined always to fall far behind in their facilities and equipment for handling abnormal transportation problems whenever these problems turn up. The great car famine of last winter, however, not only caused the railroad companies to devote their energies to this difficulty more effectively than ever before but enlisted in their aid the sympathy and effort of every business man. To this fact, more than anything else, will be due such improvement that takes place this year. The assistance given by the shipping public has been chiefly in the direction of loading cars to capacity and unloading with as little delay as possible.

We do not yet wish to go on record as stating that the car shortage has been avoided for the present year, but we do wish to present the facts which point in that direction. In Canada the reports received from many lumbermen in various provinces are encouraging. In the United States statistics available to-day are strongly indicative of a far better situation than anyone thought possible a short time ago. The Railroad War Board of the United States, under the chairmanship of Mr. Fairfax Harrison, operating the railroads of the United States as one railway system, has already obtained results that fall little short of marvellous. During the short time since the board was created it has not been possible to make any appreciable increase in equipment, but, with the patriotic assistance of shippers, the car shortage almost immediately began to show reduction. On May 1 the high point of shortage for the present year was reached, the excess of unfilled car orders on that date amounting to 148,627 cars. By June 1 the shortage had been reduced to 106,649 cars. By July 1 it was only 77,682 cars. On August 1 the shortage was 37,062 cars, and on September 6 it had been still further reduced to 31,591 cars. During a

four months' period, therefore, there has been a reduction in the shortage of no less than 78 per cent.

It is very interesting to examine into the details of operations that have produced this result. For instanec, during the month of June, the revenue ton miles amounted to 32,504,988,201, as compared with 26,379,460,986 for the month of June, 1916. During the four months under consideration the freight locomotive miles increased 10.5 per cent.; loaded freight car miles increased 10.7 per cent. Empty freight car miles increased only 8.7 per cent. All this increased service was performed with an addition of only 1.8 per cent. in the average number of freight locomotives in service and of 3.2 per cent. in the number of freight cars in service. A more definite idea of the part played by the shipping public is secured from the statistics of tons per train. This was increased from 642 tons to 715 tons. In other words, each train carried 73 more tons of freight, or 11.4 per cent. more than previously. The tonnage per loaded car was increased by 2.7 per cent. The improved results extend also to the miles per locomotive per day, the average of which increased 5.6 per cent., while the average mileage per car per day was increased 1.8 per cent. The percentage of empty car miles was reduced by 1 per cent., and the percentage of freight locomotives and freight cars in shop or awaiting shop was also reduced.

Substitutes Strengthening Their Grip

Twenty-five years ago lumber was regarded as almost as much of a necessity as wheat, while to-day it is steadily being replaced by various substitutes, says a report by the United States Forest Service on "The Substitution of Other Materials for Wood." Disregarding the temporary effect of the war, with its sudden demand for lumber and its great enhancement of prices of many substitute materials, the report points out the tendency in the long run. Each year more steel, concrete, brick, or tile is being used in places where lumber was formerly employed. This is particularly true in cities where enactment of building codes and the development of new forms of construction have created a demand for more durable building material. Shingles have given way largely to composition and tile roofings, wooden sidewalks have been almost wholly replaced by cement, while the modern skyscraper, with its steel framework and stone, brick, or tile walls, occupies the site of some former frame structure. Railroad cross-ties and mine props are about the only forms of wood which are not affected.

How hard this substitution has hit the lumber business is shown by the government estimate that the total replacement of lumber in all forms of use is 8,090,000,000 board feet, or 21 per cent. of the lumber consumption of the United States in 1915. The rate of substitution seems to be increasing, and is now in excess of 500,000,000 board feet a year. Approximately 70 per cent. of the lumber cut goes into forms of use whose demands appear to be decreasing. Twenty per cent. more goes into strongly competitive fields. In the remaining 10 per cent. of wood uses there seems to be a much better opportunity for a larger consumption.

Increasing substitution has not, however, lowered lumber prices to the consumer. On the contrary, they have steadily advanced, while the cost of many substitutes has decreased. Exhaustion of the stands of local timber and discovery of new sources for the manufacture of other building materials are given as some of the reasons for these changes. More than 75 per cent. of the replacement of wood, however, is made in spite of higher initial cost of the substitute.

The effect of the growing use of other materials has been to accentuate competition and decrease profits in the lumber business. As a result of this and other reasons, alternate periods of curtailment and over-production have made the lumber market unstable. This, in turn, has resulted to the disadvantage not only of the persons whose money is invested in timber and sawmills, but to the many hundred thousands who are dependent upon the lumber industry for their living.

Lumbermen have felt the effect of the replacement of their product by other materials, but have not realized the extent to which it has taken place. They have failed to adopt aggressive selling methods, and have been unable to supply the consumer with reliable information regarding lumber, because they did not have it. A complicated system of grades is in use which is not intelligible to the average consumer, and is even the subject of considerable dispute among lumbermen.

Manufacturers of other building material have spent large sums of money to obtain reliable information about their products. They have had to advertise extensively to make a "place in the sun" for themselves. Substitutes for lumber are guaranteed to meet specifications which are easily understood by the consumer. These facts have combined to make the substitutes increasingly popular.

If lumbermen are to hold their markets against competing materials it will be necessary for them to learn more about the fundamental properties of wood. They can do this either by scientific research for themselves or by co-operating with agencies already established. Better manufacturing and selling methods and the development of by-products should enable them to make a profit in spite of the limitations on the prices of lumber which may be imposed by competing substitutes.

Newfoundland Enjoying Remarkable Trade Activity

Advices recently received from Newfoundland and Labrador are that the summer has been one of unprecedented activity in the sawmills, and that stocks far beyond anything ever conceived there are piled ready for shipment to the best market. The logging season of 1916-1917 surpassed everything in the history of these countries.

Paper and pulp mill men are interested, also, for the timber lands of Labrador are very extensive, with much of it along tide-water and all of it easily procurable at comparatively small cost; small, at least, in comparison with that encountered at various times in the American woods.

The logging season was unusual during the past year, and already crews are being gathered for an even greater output this fall and winter, that is, if men can be obtained in numbers needed. So many experienced woodsmen have been taken into the army by the government that the available supply of experienced men is not great.

There are indications that the early commencement of woods operations, which made the season so successful last fall, will be repeated. Early frosts followed by light snows are ideal for logging in the Northern woods, and there will soon be plenty of them. Last season, excellent weather conditions continued until late spring, with the result that the output from the woods broke all records.

Not only was the cut the largest, but it covered a wider range of grades and quality than has been customary. There was a smaller output of "pit-props," owing to the lack of proper tonnage to England, which is the natural market for these. All the pulp and paper mills increased their stocks to an enormous extent, and the sawmills greatly exceeded their previous totals. A competent authority says that the output of pine, spruce and fir was twenty-five per cent. above the previous season's cutting.

Mrs. H. E. Suckling, 14 Forden Avenue, Westmount, P.Q., has issued an appeal for Christmas gifts in kind or money for the men of the Canadian Forestry Corps. These men are doing splendid work overseas, often near the firing line, and gifts will be much appreciated. Mrs. Suckling states that Mrs. (Col.) J. B. White, of the 242nd Forestry Battalion, with Mrs. (Rev.) Elliott Baker and the officers' wives, are now at work preparing Christmas comforts and gifts for the men, which are to be sent direct to the forestry corps in France and Great Britain.

Trade and Logging Conditions Reviewed

Manufacturers and Wholesalers Agree Regarding Difficulty in Summing Up Present Situation—Logging Costs Still Advancing

The Wholesaler's Market Situation

Editor Canada Lumberman: Toronto, Ont.

I visited the New England States recently and while there called upon the trade, not with a view of doing any business, but for the purpose of finding out how the situation was regarded by the eastern dealers. So far as I could learn, there is comparatively little doing in the way of house building. The retail yards are not very busy. While a great deal of money is spent on buildings, it is almost entirely for additions to munition factories and for manufacturing plants, connected in some way with war orders. Spruce is being sold at high prices in Boston because of the difficulty in obtaining a supply of yellow pine. At the same time, the large wholesale dealers seem inclined to conservatism in regard to future purchases. They all express uncertainty as to the financial outlook for the next six months and are not disposed to enter into extended contracts at the present high prices.

With regard to the local market there appears to be a large decrease in the producton of both spruce and white pine as compared with former years. There does not seem to be much prospect of spruce receding from present prices, unless business comes to a complete standstill through the stoppage of building operations and the cessation of shell box orders.

The stock of white pine is low, as compared with ordinary years, and there have been heavy shipments by water to United States points which will have the effect of leaving a short supply to be carried over the winter at Georgian Bay points. Wholesalers appear to be disinclined to make purchases that will run into next season, and retailers and factory men are also holding back, so that trade at the present time may fairly be decribed as dull.

The supply of hemlock at the mills appears to be larger than was anticipated, but millmen are holding out still for advanced prices, while it is difficult for wholesalers to obtain orders at present. It is reported that millmen are going into the woods with stronger forces than usual this season, and are planning to take out large stocks. Even if this turns out to be correct, the market should not be affected very much until the middle of next year. As I see it, there is a great deal of uncertainty in regard to the financial outlook, and dealers generally are not disposed to extend their indebtedness for new purchases into the next season.

If munition orders are cut off to any considerable degree from Canada, it will mean that many men will be thrown out of work and business generally will be seriously affected. At present, it looks as if the great bulk of the business was going to the United States, where the British Government are obtaining their main supply of money.—Toronto Wholesaler.

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Prices Expected to Continue Firm

Editor Canada Lumberman: Toronto, Ont.

Following the declaration of war in 1914, a decided falling off in business took place in the lumber industry, as in other undertakings, and 1915 was a year of uncertainty and caution.

Owing to the uncertainty of development, a very small cut was taken out that winter, and when the demand for lumber for use in making shell boxes sprang up, the available stock cut, and at the mills, was practically exhausted before the new cut was ready.

Conditions throughout Canada, generally speaking, had by this time become more prosperous; commodities of every description advancing in price, labor being scarcer, and wages higher, making everything that entered into the cost of production so much higher that during the past year it has cost very much more to produce lumber than formerly.

With this increased cost, prices have jumped accordingly, and with the possibility of embargoes again on the railroads during the coming winter, manufacturers and consumers have protected themselves with the purchase of ample stocks, and in the majority of cases their yards are stocked to capacity.

Owing to the trade being well stocked, and the falling off of shell box orders, conditions took quite a lull in August, and will probably continue so till some of the stocks in the hands of consumers become exhausted.

The stocks in hand at the mills and in the wholesale distributing yards are much smaller than usual, and with the labor outlook so unpromising, the cost of production so high, we feel that the lumber produced during the coming season will not be in volume enough to depress prices, and that the demand, even if smaller, will be sufficient to consume the available supply of lumber produced.—The Gall Lumber Company, Limited.

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Recommends Conservative Operation

Editor Canada Lumberman: Canford Mill, B.C.

During the current year we have operated extensively, running 20-hour shift. The result is that we have done a large volume of business and prices for stock have been higher than normal, but the cost of labor and material is so high that the sum total of the year's business will show not any too favorable a margin.

With this experience to guide us, we now feel that future operations should be conducted conservatively, that large stocks of logs should not be accumulated, and that we should arrange our plans to log and manufacture about in keeping with market demands. Conditions generally are so unusual that it is not a time for speculation, consequently we intend to approach the matter in a very careful way and take advantage of the situations as they develop.

We do not see how there can possibly be any reduction in the price of lumber until the price of labor and supplies declines. We are, however, fearful that the high cost of all kinds of building material and the scarcity of labor will seriously restrict operations and this being the case it is plain that unless the lumber manufacturers of Canada reduce their output there may be an over-production with consequent weakening of prices.

I am confident that the manufacturers will co-operate and regulate their operations in such a way that a living return for their labor may be received. —The Nicola Valley Pine Lumber Company.

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Firm Prices Probable During Winter

Editor Canada Lumberman: Toronto, Ont.

It is very difficult to give a reliable and comprehensive opinion of trade conditions at present.

There are wide differences of opinion with regard, not only to the present prices, but to prospective future prices. We are inclined to think that neither the pessimist nor the optimist will have his way. Prices have settled down to a little lower basis on many lines, including hemlock, but the supply is short on hemlock.

In addition to this the demand from the United States is not as great as it was a few months ago. On the contrary we cannot see that there is any more lumber on the market than a quite diminished demand will absorb before next spring.

To sum up, our opinion is, that the price on white pine will be well maintained, this also will apply to red pine, and while spruce has shown a little weakness recently, we think it will come back to its own very shortly. In fact, it is showing evidence of this now. Hemlock may suffer a little through competition from yellow pine, small quantities of which are beginning to come into this market.

We anticipate that when the fall season is over, and we get into the winter, the remaining stocks will be held in strong hands, and prices will be well maintained throughout the winter.—Wholesaler.

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High Prices Expected to Continue

Editor Canada Lumberman: Owen Sound, Ont.

Replying to your query as to present conditions and future outlook in the lumber business, we would say that the prices at present are high, and we can see no chance of them going lower for the next year at all events.

We think there is only a very moderate supply of hardwood lumber in this country, and with any reasonable demand, we look for scarcity long before the new stock comes on the market. With an increasing scarcity of men,, and with increased labor costs, we would consider it a wonder if an average cut were taken out this winter; to say nothing at all of abnormal winter conditions, which are always possible. With any reasonable demand we look for considerable shortage long before the new stock comes on the market.

American prices are ruling considerably higher than ours, and no relief can be looked for from that quarter. Where demands have slackened lately, due to a variety of causes, we have no fear of a glut in the lumber situation, nor any lowering of prices, and we will advise any friend to secure his season's supply now, instead of taking chances later.

Lumber can now be shipped direct from the mill in most cases, without unnecessary handling, which must be done a little later.—Keenan Bros. Limited.

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Finds U. S. Hardwood Markets Firm

Editor Canada Lumberman: Toronto, Ont.

The writer has just returned from the South, and finds conditions favorable. True, the market is somewhat spotty in places, but this is accounted for by the fact that the United States has just entered the war, or rather it is only at this time she finds herself really interested, and naturally there is some reaction. However, with very few exceptions, we find prices are strongly maintained, and where there is any reduction it is caused by the fact that in some instances where the mills have been provided with an abundance of

cars they have been tempted to put stock in transit, with the result that the consuming market has been temporarily overloaded.

This condition of affairs, of course, will not last, and we expect the market to strengthen again at an early date.

With regard to market conditions in this country, the prices on hardwoods are considerably lower than those found earlier in the season, and at this time we are hardly in a position to state just what the outcome will be. —The Seaman Kent Co., Ltd.

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B. C. Mills Expecting Good Prairie Trade

Editor Canada Lumberman: Waldo, B.C.

It is our intention to start logging about the first of February, and to log a normal cut this winter, which will be between 13,000,000 and 15,000,000 feet, which amount is a normal cut for this plant in a ten-hour day run. We might add that it has been a practice in former years with this company, together with many others situated in this district, to log what is known as hot logs in the summer season. Since the war has started, however, the labor situation will not permit of this class of logging, and we are forced to cut and skid our total year's supply in the winter months.

The lumber situation at the present time appears to us very hopeful, and the crop that has been harvested in the three prairie provinces, together with the high price the farmers are getting for their wheat, we feel sure will create a good demand for lumber next season. Stocks are very low in the mountain district, and the indications here are that all the available labor will be employed this winter in logging.—Ross-Saskatoon Lumber Company, Limited.

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Scarcity of Stocks and Low Prices Likely to Continue

Editor Canada Lumberman: Burks Falls, Ont.

No one can give more than a guess regarding market conditions—mine will run about as follows: The present condition of scanty stocks and high prices for lumber will continue, in my opinion, until our difficulty in Europe is arranged. The prevailing shortage of labor is likely to increase, thus inducing a tendency to prevent a large crop of logs coming out. So, even with reduced consumption of lumber, present prices are likely to continue or even advance; more likely the latter.—Henry Knight, President of Knight Bros. Company, Limited.

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Scarcity of Men in Quebec

Editor Canada Lumberman: Doreil, P.Q.

We are operating the limits of the former St. Simeon Lumber Company, Limited. We do no logging, but are cutting pulpwood only, and are preparing to cut from thirty thousand to forty thousand cords for this season. We find great difficulty in getting men although we have eight or ten agents in different localities getting us all the men they possibly can.—Provincial Industries, Limited.

The Waste of Hemlock in British Columbia

There is one subject which is worthy of much closer attention than has been devoted to it up to the present—the utilization of hemlock bark as a tanning material.

In 1916 the cut of hemlock in British Columbia amounted to one hundred and one million feet board measure. Taking fifteen hundred feet board to provide one cord of bark, this is equivalent to sixty-seven thousand cords of hemlock bark. The value of hemlock bark f.o.b. shipping point in Eastern Canada and Eastern States is about $14 to $16 per cord. Taking the conservative value of British Columbia hemlock bark at only $10 per cord, the 1916 cut represents a value of $670,000.

British Columbia hemlock bark should be worth more than Eastern Canadian bark, because it contains, on an average, 16 per cent. tannin against only 10 per cent. in the Eastern bark.

Turning to the raw hide question, there are approximately 25,000 cattle killed annually in British Columbia. The hides are shipped out of the country to the Western and Middle States, and leather manufactured at those points is shipped into Canada. Consumers of shoe and harness leather in British Columbia have always had to import their sole and harness leather from foreign countries or bring it from Eastern Canada. Added to this, enquiries are coming to hand frequently from the Orient and from Pacific countries for sole leather. As an instance of the insistent demand, it may be stated that in September, 1916, Japan purchased the enire available stocks of sole leather in the Pacific Coast States and placed further heavy contracts absorbing practically the entire output for six months ahead. So far as the actual demand for sole leather in British Columbia is concerned, a conservative estimate places it at 250 "sides" daily (a side being half a hide). This is equivalent to 120.000 "sides" per year. As above stated, British Columbia produces 25,000 hides (equal to 50,000 "sides") per year, so that the local market would more than absorb our local production of leather.

The above facts would seem to make a very good case for the establishment of a sole leather industry in British Columbia, the raw material being abundant and the consuming market steady.

We now come to the influences which have prevented the establishment of a tan bark and tanning industry up to the present time.

Up till a few years ago Western hemlock was in little demand as a building material, the name suggesting the inferior Eastern species. The prejudice against hemlock was so strong that timber limits containing a large proportion of this timber were almost unsaleable owing to mills finding difficulty in marketing hemlock lumber. Practical education has changed this, and to-day the prejudice of prairie consumers has been removed, Western hemlock commanding a price commensurate with its true value. In addition to this, hemlock is being very largely used as a pulp wood, and its use in this connection will undoubtedly increase very greatly within the next few years.

It may be asked why hemlock bark in British Columbia cannot be marketed and used in the same way as the inferior Eastern hemlock bark, the more so since its tannin content is so much higher? The difficulty is purely an economic one. In Eastern Canada there is a steady demand for hemlock bark at prices which make the peeling and marketing of the bark quite an adjunct to the Eastern timber industry. There the lumbermen send a section of their river-driving gangs back to the woods in early mid-summer to peel and pile tan bark for drying, and before the fall rains it is hauled out of the woods on wagons. On the Pacific Coast this plan is not practicable, owing to the different logging methods in use and to some extent to the difficulty of haulage. Here most of the logging is done by donkey-engines, and the log receives rough treatment in hauling over the ground to the loading deck, the comparatively soft hemlock bark becoming torn and pitted with stones and pebbles, which greatly lessen its market value. Efforts have been made by parties wishing to make experiments on a commercial scale to secure regular supplies of hemlock bark from the loggers, but there appears to be a disinclination on their part to bother with the matter, as they did not feel assured a regular market will exist.

Experiments Needed

This situation is obviously one which should be studied by the provincial forest department. Some way can be found for creating regular supplies of the bark, and it appears to the writer that the best plan will be to demonstrate to the loggers that it will pay them to peel the logs and market the bark. The process of extracting tannin from the bark is a simple one, and the cost of establishing an experimental plant for manufacturing dry tannin extract would be comparatively small. Once the government have assured themselves of the feasibility of the business there is not the least doubt that capital would readily be forthcoming to establish the industry on a large commercial basis. If the manufacture of dry tannin extract were carried on in British Columbia, the product could be shipped to any part of the world, as the freight on the concentrated material would enable it to compete with similar products in the world's markets. Such industry could, without doubt, be established in conjunction with the large and growing pulp and paper industry in this province.

Western hemlock bark has been used as the exclusive tannin agent in at least one tannery in Washington for a number of years. This concern manufactures chiefly skirting leather for saddles. Its larger use has been prevented by the lack of tanneries, due to economic reasons rather than unsuitableness. The prevailing cost of hemlock bark f.o.b. tannery has been $11.50 per cord.—J. H. Hamilton, in Canadian Forestry Jurnal.

Improving British Columbia Plant

J. O. Cameron, president of the Cameron Lumber Company, Victoria, B.C., was in Portland, Ore., recently as a delegate to the Port Conference. Mr. Cameron reports that his company is operating steadily, at both their own plant and that of the Canadian Puget Sound, in Victoria, says The Timberman. At the Cameron Lumber Company's plant a new electrically-driven planing mill, equipped with two Yates No. 91 fast feed machines and a 16 x 20 timber sizer, are being installed; also a box factory with a capacity of 50,000 feet. The equipment in the planing mill and box factory is to replace the equipment which was destroyed in the fire. A Swedish direct connected generator will furnish the electric power. The Cameron Lumber Company is turning out 90,000 to 100,000 feet per day, while the Canadian Puget Sound is cutting 125,000 feet.

The Genoa Bay Lumber Company, at Genoa Bay, in which the Camerons are interested, is cutting 100,000 feet per day. George R. Elliott is the manager. This company loaded the motor ship Esquimalt with 1.600,000 feet for Australia, and is also loading a vessel for Hind, Rolph & Co., of San Francisco, for the west coast of South America with a million feet.

S. H. Fullerton, of St. Louis, president of B. C. Mills & Timber Company, Vancouver, and of the Chicago Lumber & Coal Company, St. Louis, has acquired a principal interest in a new sawmill at White Sulphur, Fernie district, where spruce limits have been secured.

Toronto Trade Resume Meetings

Lumbermen Planning for Important Association Developments During Winter Season

The first meeting of the Lumbermen's Section of the Toronto Board of Trade for the season, was held on Firday, October 12th. There was no formal business to be disposed of, but the members discussed the work of the section, and, as a result, plans were developed for greatly enlarging the work and usefulness of the section. Mr. H. J. Terry introduced the subject and everyone present took a share in the discussion, which centred upon a proposal that the wholesalers of Toronto should form a branch of the section to deal with their special wholesale problems, in manner similar to that of the retailers, who have monthly meetings, taking place in the evening after an informal dinner. The consensus of opinion was that in this way the two branches of the trade could work out the solution of their separate problems most successfully, and that matters of mutual interest to all could be dealt with at joint meetings, held possibly once a month. Numerous suggestions of questions to be dealt with by the wholesalers were made, including the formation of a credit bureau, providing for inspection when disputes regarding grades arise, dealing with transportation matters, etc. It was thought that all such matters could be effectively handled in such a manner and there was keen enthusiasm regarding the proposal.

The upshot of the discussion was a decision to hold a special meeting of the whole section on October 26th, when a good attendance will be ensured by a personal canvass, and the views of all members of the trade can be secured.

From the opinions expressed it seems to be assured in advance that some such plan will be put into operation and that the value and influence of the Lumbermen's Section of the Board of Trade will be greatly enlarged. The chairman will send a circular letter to all lumbermen in Toronto, urging them to attend the meeting on October 26th.

Mr. J. B. Reid, the chairman, introduced a discussion regarding a notice he had recently received from Mr. John Gray, local Grand Trunk freight agent, at Toronto, to the effect that the Grand Trunk would not release cars transferred by a wholesaler to a retailer at Toronto, until he received a cheque for the freight, or an acknowledgement for it, from the wholesaler himself. In other words, the railway would not accept the cheque of the retailer to whom the car was transferred, but insisted upon direct payment from the wholesaler making the shipment. The members present thought that this circular had been the result of the railway having trouble in one particular case where a wholesaler and a retailer disagreed regarding the freight charge, each claiming that the other should pay it, and that the railway company had decided in future to make a rule of demanding payment from the shipper before releasing the car. The members all agreed that they should object strongly to such a regulation, and finally on motion of Mr. A. E. Gordon, seconded by Mr. C. W. Wilkinson, it was carried that the secretary should write to Mr. John Gray, local Grand Trunk freight agent at Toronto, advising him that the section strongly condemned the proposed regulation and inviting Mr. Gray to attend the next meeting of the section as its guest, in order to discuss the matter, before the lumbermen go further and laid it before the Board of Railway Commissioners for Canada.

Central Ontario Retailers Appoint Committee

A meeting of retail lumber dealers from the central district of Ontario, called for the purpose of appointing a committee to represent them at the organization meeting of the Ontario Retail Lumber Association was held at Toronto on September 28. The meeting was called to order at 1.30, and, on motion of Mr. Walter C. Laidlaw, seconded by Mr. W. J. Hetherington, Mr. J. B. Reid was appointed chairman and Mr. H. Boultbee secretary. The meeting was entirely of a formal nature, the members being already closely in touch with the plan that is being worked out for organizing the Ontario Retail Lumber Association. The chairman, however, explained the situation briefly, and urged the retailers to co-operate as vigorously as they could, in order that the association might be of the greatest possible value to its members. He also outlined a few of the matters with which the association would be able to deal, such as legislation, transportation, grading, insurance, advertising, plan books, service, etc.

The subpect was then discussed informally by those present, and, on motion of Mr. Laidlaw, seconded by Mr. Hetherington, it was carried that the meeting express its approval of the proposed organization and appoint a committee to represent it for this purpose at an organization meeting of the general Ontario association. The mover of the resolution suggested the following names, which were approved by the others present: William Barrett, of the Canada Lumber Company, Weston, Ont.; A. C. Reesor, Locust Hill; J. B. Reid, Toronto; T. H. Hancock, Toronto; W. J. Hetherington, Toronto, and William H. Thomson, Port Credit. The name of Mr. W. C. Laidlaw, mover of the resolution, was also added to the committee.

Mr. H. A. L. Swan, secretary of the Ottawa Lumbermen's Credit Bureau, who was present at the meeting, reported that the retail lumbermen of Ottawa were heartily in sympathy with the proposal, and could be counted upon to take steps for the appointment of a committee to represent them at the organization meeting. Mr. Swan also explained the great benefits which the retail lumbermen of Ottawa had obtained through their credit bureau and their co-operative policy.

Another informal discusssion followed, and the meeting adjourned to be called again after the general Ontario meeting has been held.

New Shell Box Contracts Being Placed

The interpretation of the shell box situation published in the Canada Lumberman of October 1 is being borne out by the fact that new contracts for considerable quantities of shell boxes have since been placed by the Imperial Munitions Board, while further contracts are confidently expected. The contracts that have been let recently are for 4.5 in. and 6 in. shell boxes. No new orders for the Bethlehem type of box have been let, and it appears that, for the time being, there will be no business in this box. Information obtained by the Canada Lumberman from reliable sources is to the effect that the Imperial Munitions Board are buying and contracting for 6 in. shells in as large quantities as possible, and that orders for this type of shell will be given in large quantities, and will continue well into the middle of next summer at least. Shell box manufacturers may, therefore, count upon a good demand for boxes for this type of shell. It will not be such a simple matter to produce shell boxes during the coming winter as it has been, because of the scarcity of wide spruce. Manufacturers and wholesalers report that stocks of this kind have practically disappeared, on account of the heavy demand. It begins to look as though some of the thick stock may have to be used, after being resawed, which will involve an alteration in the specifications, so as to permit of possibly a shade thinner material in the finished boxes than formerly.

Three Per Cent. War Tax on U.S. Freight Bills

A despatch from Memphis, Tenn., states that the secretary-manager of the Southern Hardwood Traffic Association is sending out circular letters to members advising them that there will be a 3 per cent. war tax added to all their freight bills on lumber and forest products on or about November 1. He is also advising them that members of the association in Memphis are having rubber stamps made with which to indicate on all quotations that the increased freight cost involved in this government tax will be added to the price of lumber.

There is a tax of 7½ per cent. already imposed by the Canadian Government on lumber imported from the United States. The Canadian Government, however, has ruled that, where there is no specific agreement covering this matter, the tax must be borne by the consignee.

Officials of the Southern Hardwood Traffic Association are rather of the opinion that the necessity for securing licenses and the requirement that Canadian importers must satisfy the authorities in the United States that the lumber they are seeking is to be used in some manner that will contribute to the winning of the war will restrict the movement of lumber to Canada.

Cylindrical Heads Compulsory for Ontario Jointers

The substitution of cylindrical or safety round heads for square heads on jointers or buzz planers in all pattern shops has been ordered by the Factory Inspection Branch of the Ontario Department of Public Works, with a view to eliminate the possibility of serious accidents on these machines. Many woodworking firms have made the change, as the advantage of the cylindrical head over the square head is that it fills the gap or throat of the machine table and the knives project so little that if the hands of the operator should come in contact with the machine they could not be seriously mangled. It is not claimed that it will preclude the possibility of all accidents, but, used in conjunction with the usual guard, it should go far to lower the number of accidents on these machines. The inspectors have been instructed to order the change as outlined above.

Toronto Building Activity Shows Increase

The buildings erected in Toronto during the first nine months of this year exceed in value those erected during the same period last year by the sum of $580,205. The figures for this year are $5,588,845, compared with $5,008,649 for last year. Permits and buildings for the month of September, this year, also exceeded those of September, 1916. The figures are: Permits: 1917, 448; 1916. 387. New buildings: 1917. 522: 1916, 465. Month's business: 1917 $650,271; 1916, $643,272; gain, $6,999.

Poles Purchased in 1916

A bulletin upon "Poles Purchased in 1916" has been published by the Forest Branch of the Department of the Interior, Ottawa. The statistics contained in the bulletin are based upon reports received from 314 firms purchasing poles in Canada. These consist of 176 telephone companies, 100 electric light and power companies, 21 electric railways, 13 steam railways, and 4 telegraph companies.

The number of poles purchased and their value, during 1915 and 1916, by kinds of wood are shown in the following table:

Poles Purchased During 1915 and 1916

Kind of Wood.	1915				1916			
	Number.	Value.	Av Value.	Per Cent.	Number.	Value.	Av. Value.	Per Cent.
TOTAL PURCHASED BY ALL USERS.								
		$	$ cts.			$	$ cts.	
Total	**179,248**	**459,848**	**2 52**	**100·0**	**182,317**	**427,154**	**2 34**	**100·0**
Eastern Cedar	120,749	293,927	2 43	67·4	143,018	300,438	2 10	78·4
Western Cedar	19,817	113,126	5 71	11·1	23,834	105,173	4 41	13·1
Tamarack	16,706	15,869	0 95	9·3	8,807	9,179	1 04	4·8
Spruce	10,119	12,901	1 27	5·6	3,167	5,082	1 60	1·7
Balsam Fir	4,063	6,908	1 70	2·3	2,055	3,580	1 74	1·1
Jack Pine	4,145	3,259	0 79	2·3	705	971	1 38	0·4
Hemlock	587	1,935	3 30	0·3	334	1,401	4 19	0·2
Chestnut	240	182	0 76	0·1	173	126	0 73	0·1
White Pine					100	1,000	10 00	0·1
Ash					100	60	0 60	0·1
Oak	94	657	6 99	0·1	24	144	6 00	*
Douglas Fir	2,548	1,529	0 60	1·4				
Cypress	100	475	4 75	0·1				
Poplar	80	80	1 00	*				

The electric railway, power, and light companies purchased 46,252 poles during 1916, as against 69,398 in 1915. The average value of the poles purchased by these companies in 1916 was $4.45. The average value in 1915 was $4.11.

Steam railways, telephone and telephone companies during 1916 purchased 136,065 poles, at an average value of $1.63, as against 109,850 poles in 1915, the average value of which was $1.51.

There were 3,069 more poles purchased in Canada in 1916 than in 1915, an increase of only 1.7 per cent., but notable as the first increase since 1912. Poles were cut from fourteen different kinds of wood, and of these kinds Eastern cedar composed 78.4 per cent. and Western cedar 13.1 per cent. a total of 91.5 per cent. of cedar. The species next in order was tamarack, which made up 4.8 per cent. of the total. The number of poles cut from Eastern and Western cedar increased, while practically all other species show decreases. Douglas fir, which formed 1.4 per cent. of the poles in 1915, is not reported in 1916.

The average purchase price of all poles has varied as follows in recent years: 1913, $2.22; 1914, $2.33; 1915, $2.52; 1916, $2.34.

The steam railway, telephone, and telegraph companies purchased 74.6 per cent. of the poles, as compared with 61 per cent. in 1915 and 65.7 per cent. in 1914.

The prices in the report are based on the cost at the point of purchase.

During 1916 the poles purchased were divided, according to length classes, as follows: 20 to 25 feet, 54.1 per cent., average value $1.16; 26 to 30 feet, 24.2 per cent., average value $2.26; 31 to 35 feet, 12.3 per cent., average value $4; 36 to 40 feet, 5.9 per cent., average value $5.84; 41 feet and over, 3.5 per cent., average value $9.52.

Cross Ties Purchased in Canada in 1916

A bulletin upon "Cross Ties Purchased in Canada in 1916" has been issued by the Forest Branch of the Department of the Interior, Ottawa. The bulletin is based upon reports received from 34 steam railways and 33 electric railways.

A total of 7,839,515 cross ties was purchased in 1916, an increase of 246,985, or 3.2 per cent. over 1915. This is the first year there has been an increase in the number of cross ties since 1912.

Of the total cross ties purchased 199,099 were treated with preservative to withstand decay. This is 2.5 per cent. of the total, as compared with 5 per cent. in 1915 and 7 per cent. in 1914.

Jack pine heads the list in number of ties cut, with 47.3 per cent. of the total. Jack pine has held this position since 1911, when it displaced white cedar. White cedar still holds well on to second place, the percentage of cedar cross ties being more than double that of hemlock, its nearest competitor.

The average value was 42 cents per tie in 1916, as compared with 44 cents in 1915. Electric railways purchased 3.4 per cent. of the total in 1916, as compared with 2.5 per cent. in 1915 and 1.1 per cent. in 1914. The electric railways paid an average of 44 cents per tie, while the steam railways paid an average of 42 cents.

The number of cross ties imported in 1916 was 622,819, valued at $424,599, as compared with 1,219,594 imported in 1915, valued at $940,407. The majority of these cross ties were of species of wood either not native to or not abundant in Canada, such as oak, hard pine, chestnut, and gum.

The leading kinds of wood purchased for cross ties by the steam railway companies in 1916 were as follows: Jackpine, 3,688,195, average value 39c; Eastern cedar, 1,570,586, average value 45c; hemlock, 569,474, average value 36c; tamarack, 414,367, average value 37c; Eastern spruce, 344,937, average value 42c; oak, 339,712, average value 71c; Douglas fir, 279,092, average value 31c; hard pine, 126,559, average value 67c.

The leading kinds of wood purchased for cross ties by the electric ralways were as follows: Eastern cedar, 72,250, average value 44c; hemlock, 52,232, average value 48c; Douglas fir, 49,622, average value 29c; Jackpine, 40,586, average value 43c; tamarack, 20,466, average value 45c; oak, 14,039, average value 83c.

T. and N. O. Pulpwood and Pulp Shipments

During the month of August the T. and N. O. Railway made pulpwood shipments to Thorold, Toronto, Merritton, Ottawa, Ont., Niagara Falls, Suspension Bridge, Brownsville, Fulton, and Norfolk, N.Y., Johnsonburg, Pa., and Appleton, Wis., as follows:

	Cords.
August 1 to 7	2,384
August 8 to 14	1,763
August 15 to 21	1,802
August 22 to 31	3,158
	9,107

This represents a decrease of 2,261 cords, or 20 per cent., as compared with July, 1917.

Wood pulp and paper shipments were as follows:

	Wood pulp. Tons.	Paper. Tons.
August 1 to 7	491	1,010
August 8 to 14	482	1,309
August 15 to 21	400	1,438
August 22 to 31	306	1,704
	1,679	5,461

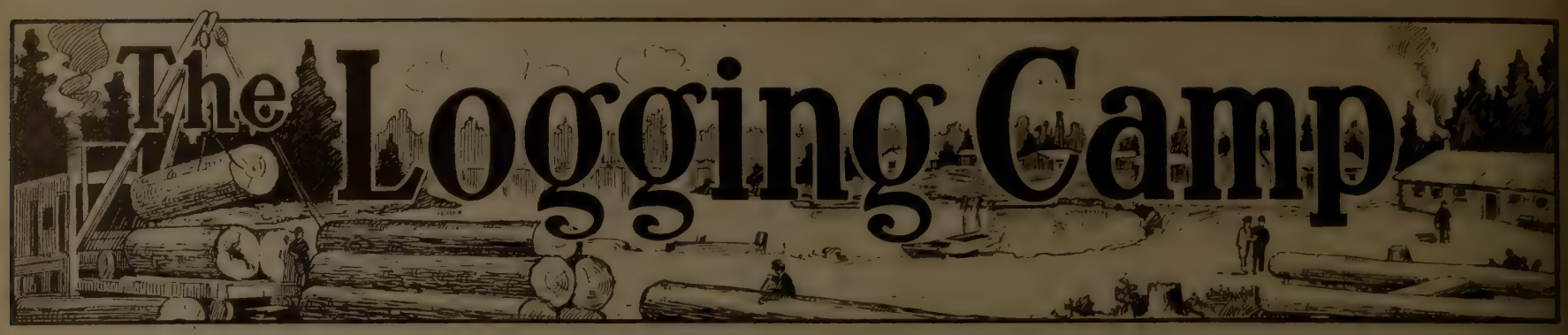
Compared with preceding month's shipments, this represents an increase of 450 tons, or 36 per cent. in pulpwood, and 328 tons, or 6 per cent. in paper.

The New Dollar Mill a Fine Plant

The new mill of the Canadian Robert Dollar Company, Limited, near Vancouver, B. C., which recently commenced operating, will have a daily capacity of from 175,000 to 200,000 feet. The mill is electrically driven throughout. It is located on a well selected site about seven miles from Vancouver, and there is about thirty feet of water at the mill dock at low tide. The dock has a capacity for carrying about 6,000,000 feet of lumber and can accommodate three vessels at one time. The mill will be operated exclusively as a cargo plant. Mr. G. Winkelmann, formerly of the Stimson Mill Company, of Ballard, is manager. In addition to having charge of the mill, Mr. Winkelmann is also manager of the company's logging operations at Union Bay, Vancouver Island. Mr. Winkelmann is one of the youngest mill managers on the Coast, being only 33 years old. He lived in New York until he went West in 1907. He entered the employ of the Stimson Mill Company of Seattle, this being the only company by which he was ever employed in the Northwest. For two years he was in the shingle business, but subsequently returned to the Stimson Mill Company.

United States Shipments Exceeding Cut

Reports to the National Lumber Manufacturers' Association of the United States show that during the month of August 701 sawmills cut 1,385,900,000 feet of lumber and shipped 1,575,800,000, or 13.7 per cent. more than production. Of these totals the cut of softwoods amounted to 1,291,100,000 feet and the shipments of softwoods to 1,455,200,000 feet. Due to strikes and other unsettled conditions, lumber production in August, 1917, was 18.5 per cent. less than in August, 1916. Shipments this year were 6.6 per cent. greater than in the same month last year because of the heavy demand for building material by the government and for factory construction. During the eight months ending August 31, 1917, the mills reporting to the National Association cut 2.7 per cent. less lumber than during the corresponding eight months of 1916, but shipped 7.5 per cent. more than in the same period last year. Secretary Kellogg estimates that the total lumber production in the United States during 1917 will be between 38,000,000,000 and 40,000,000,000 feet.



Eliminating Waste in the Boarding House

The Bridal Veil Lumbering Company, Bridal Veil, Ore., has adopted a new system of boarding house reports, the object of which is to determine the amount of food used per man per meal and the cost of serving each meal. The purchasing agent of the company, in an article in The Timberman, says:

The company has determined standards of weight of food supplies per man per meal, and in order to keep records of the boarding house service in a simple way they have divided the food served under the following general heads: Meat, Milk, Butter, Eggs, Lard, Flour, Vegetables and Fruit, Sugar, All Other Groceries.

Under "vegetables and fruit" are included all fresh or canned vegetables and fruit. The important and more expensive items are considered under separate heads.

Under any general head individual studies may be made. If, for example, it is desirable to make a close comparison of what the various cooks are doing with potatoes, this item can be singled out for special study. Weight can be taken before peeling and after peeling. The exact amount of waste due to peeling can be determined, and if some flunky is careless or wasteful his waste can be detected very quickly.

Added to the cost of food supplies consumed per man per meal is the cost of labor, fuel, laundry, rent and light, and all other expenses,

BRIDAL VEIL LUMBERING COMPANY

MONTHLY

MONTH APRIL, 1917 — BOARDING HOUSE REPORT — Name of Boarding House Location Bridal Veil, Ore

Date	MEALS Brk.	Din.	Sup.	Total	Amount	BEDS No	Amount	ITEMS	MEALS Lbs	Amount	Cost per Meal	BEDS Amount	Cost per Bed
1								Inventory (1st of month)		52 77			
2								Table Supplies (furnished during the month)		160 67			
3													
4								Total		213 44			
5								Inventory (1st of next mo.)		62 30			
6													
7								Difference (shows cost of Table Supplies used during the month)		151 14			
8								Distribution, viz.:					
9								Meat	205	48 72	084		
10								Milk	342	14 06	018		
11								Butter	53	11 15	013		
12								Eggs	13	1 23	007		
13								Lard	20	4 20	006		
14								Flour	101	6 83	009		
15								Vegetables and Fruit	496	44 79	059		
16								Sugar	60	4 61	006		
17								All Other Groceries	66	11 76	016		
18													
19								Sub-Total	1236	151 14	200		
20													
21								Labor		76 04	100	89 60	120
22								Fuel		2 10	003		
23								Laundry		3 81	005	10 00	025
24								Rent and Light		19 00	025	17 00	067
25								All Other Expenses		4 91	006		
26													
27								Total		267 10	339	88 60	221
28													
29													
30													
31								Remarks:					
Total				258	212 98	600	32 00						

Unit Revenue per Meal ..... .282 Per Bed ..... .08 Lbs. per Meal ..... 1.75 Av. Cost per Meal 11.4

Signed .....

BRIDAL VEIL LUMBERING COMPANY

MONTH JULY 1917 — COMPARISON - MONTHLY BOARDING HOUSE - REPORTS. — UNIT MEAL COSTS.

ITEMS	BY BOARDING HOUSE Lbs PER MEAL	BY BOARDING HOUSE COST LB.	BY BOARDING HOUSE COST MEAL	OB HOUSE Lbs PER MEAL	OB HOUSE COST LB.	OB HOUSE COST MEAL	PALMER Lbs PER MEAL	PALMER COST LB	PALMER COST MEAL	CAMP "A" Lbs PER MEAL	CAMP "A" COST LB.	CAMP "A" COST MEAL	CAMP "B" Lbs PER MEAL	CAMP "B" COST LBS	CAMP "B" COST MEAL	AVERAGE Lbs PER MEAL	AVERAGE COST LB	AVERAGE COST MEAL
MEAT	46	.19	.09 3	20	.27 3	.05 5	48	.13 6	.06 2	.67	.12 5	.07 4	62	.12 6	.07 9	.53 6	.14 7	.07 9
MILK	46	.04 6	.02 5	36	.04 2	.01 7	51	.023	.01 2	.27	.12 6	.03 4	24	.06 2	.01 3	.37 0	.03 5	.02 3
BUTTER	.03	40	.01 3	02	.44	.01	04	45 0	.01 9	.10	40 0	.04 0	08	.37 5	.03 3	.06 2	.38	.02 8
EGGS	05	.24 2	.01 3	03	.30 0	.00 9	07	.39 0	.02 8	15	24	.03 5	04 8	24	.01 0	.07 3	.24	.01 9
LARD	04	.17 6	.00 2	02	.17 0	.00 4	03	.17 5	.00 5	.01	.17 2	.00 3	15'	.17 6	.03'	05 9	.18	.01 0
FLOUR	24	.04 9	.01	18	.06'	.00 7	24	.04 0	.00 9	36	.03 5	.01 3	27 8	.03 5	.00 9	26	.04	.01 0
VEG. & FRUIT	1.00	.05 2	.05 2	73	.02 6	.02 0	94	.05 6	.05 3	42	.02 6	.00 9	54	.02 6	.01 0	.24 5	.04 8	.03 2
SUGAR	.16	.09 0	.01 3	16	.10 5	.01 5	17	.09 3	.01 6	.16	.09 3	.01 6	.06 2	.09 8	.00 6	.14 5	.09 8	.01 8
ALL OTHER GRO	16	.09 6	.01 6	14	.04'	.06 0	20	.039	.07 1	08	.03 7	.00 3	.03 4	.13 8	.00 7	12 3	.18 3	.02 3
SUB-TOTAL.	2.60		.23 4	1.84		.20	2.68		.28 1	2.21		.23	2.00		.19 3	2.22		.23 1
LABOR			.04 8			.12 7			.07 1			.05 2			.05 6			.05 8
FUEL			.00 2			.005												.001 3
LAUNDRY			.00 1			.004												
RENT & LIGHT			.009			.027			.01 1			.00 7			.004			.009
ALL OTHER EXPS			.00 6			.01'			.00 8			.02 1			.00 3			.004
TOTAL	NUMBER OF MEALS 5271		.30 0	NUMBER OF MEALS 686		.37 1	NUMBER OF MEALS 2512		.37 1	NUMBER OF MEALS 3396		.31 0	NUMBER OF MEALS 3530		.26 1	NUMBER OF MEALS 3079		.30 89
RECEIVED FOR EACH MEAL			.30 3			.30 5			.37 2			.30 4			.29 3			.30 5

MONTH	MEALS	UNIT COST	UNIT RECD	MEALS	UNIT COST	UNIT RECD	MEALS	UNIT COST	UNIT RECD	MEALS	UNIT COST	UNIT RECD	MEALS	UNIT COST	UNIT RECD	MEALS	UNIT COST	UNIT RECD
JANUARY																		
FEBUARY																		
MARCH	2994	.34 8	.28 5	793	.32 2	.28												
APRIL	3419	.35 6	.28 6	758	.339	.28 2												
MAY	3575	.30 2	.27 8	840	.28 3	.32												
JUNE	5703	.33 8	.30 5	576	.43 7	.31	2499	.38 2	.30	3402	.37 3	.30	2608	.30 4	.30	14788	.35 8	.30 3
JULY	5271	.30 0	.30 3	686	.37 1	.30 5	2512	.37 1	.32 2	3396	.31	.30 4	3530	.26 1	.29 3	15395	.30 3	.30 89
AUGUST																		
SEPTEMBER																		
OCTOBER																		
NOVEMBER																		
DECEMBER																		
TOTAL & AV.																		

TOTALS	TOTAL COST	TOTAL RECEIVED	TOTAL COST	TOTAL RECEIVED	TOTAL COST	TOTAL RECEIVED	TOTAL COST	TOTAL RECEIVED	TOTAL COST	TOTAL RECEIVED	TOTAL COST	TOTAL RECEIVED
LAST REPORT												
THIS MONTH	1578.24	1613.83	255.11	209.25	939.90	806.10	1049.64	1043.95	938.21	1033.72	4711.10	4706.45
TOTAL TO DATE												

Comparative monthly Boarding House Report.

determined per man per meal. The total of food supplies added to the labor and other costs gives the exact cost per meal. The particular advantage in segregating labor and other costs from actual food costs is that one can make a simple and comprehensive comparison of each cook's work in terms of pounds of supplies used.

More Weight Than Army Ration

The comparison is made on the basis of pounds of food used per man per meal. The United States Government allows for garrison ration about one and one-half pounds per man per meal. Owing to the fact that the company serves fresh vegetables and fresh fruit its weight per man per meal is somewhat in excess of the government rations. The government uses more concentrated foods.

Through the medium of the reports the company has been able to detect waste on the part of its cooks, and it is found that they are only too glad to co-operate to eliminate waste when their attention is called to it.

The Bridal Veil Lumbering Company has also inaugurated in its camps a sandwich lunch.

Report by Pounds Essential

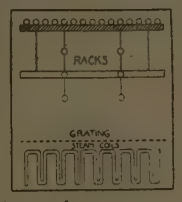
The writer has been associated with the camp operations for many years, and the reports used are the results of study of many reports of this nature. It seems that with the shortage of the nation's food supply the report in terms of pounds per meal rather than dollars and cents is especially important at this time. It is fundamental and important at any time.

In order to convert items that are not sold by the pound a weight book has been devised, which converts supplies sold by the dozen or otherwise into pounds.

Camp Cars with Dry Rooms

The Cherry Valley Timber Company, Stillwater, Wash., has added several new camp cars to its equipment, which include a bathroom 14 x 18 feet, a dry room 14 x 22 feet, and a bunk room 14 x 20 feet. The dry room is an interesting feature of these cars, and the arrangement of the drying racks may be seen in the accompanying sketch. The small diagram illustrates an end view of the dry room, showing the 15 overhead racks, 2 longitudinal racks, and 1 rack across the end. There is room for two additional longitudinal racks if desired. The racks are arranged over steam coils on the floor, covered with a wooden grating. The racks are made of old one-inch galvanized pipe.

Floor plan of dry room car.



End view of dry room car.

The dry room is connected with the bathroom by a door, as shown in the floor plan illustrated herewith. The company reports that no need is experienced for a laundry car at present, as a commercial laundry renders weekly service. Hot water and soap are provided at all times for men who desire to do their own washing.—The Timberman.

Magnitude of the Logging Industry

There is sufficient privately-owned railroad trackage in the West, devoted exclusively to the removal of logs, to build a single line of railroad from Portland to Chicago, with nearly enough more to build a double-track road from Chicago to New York. In other words, the total logging railroad mileage of the West aggregates almost 4,000 miles. In addition to this, there are several hundred miles of trackage owned by the transcontinental lines extending into timber tracts, which depend almost exclusively on the tonnage derived from the removal of logs and forest products.

The segregation of this trackage is approximately as follows: Washington, 1,850 miles; California, 750 miles; Oregon, 600 miles; British Columbia, 325 miles; Idaho, 200 miles; Montana, 85 miles; New Mexico, 70 miles; Arizona, 55 miles; Nevada, 30 miles.

The motive power used on these logging railroads includes some 600 geared locomotives and about 270 direct-connected locomotives, making a total of 870 engines of both types. There are in use about 8,000 logging trucks and about 5,600 flat cars, making a total of 13,600 logging cars of both types. Gasoline cars and speeders number 225.

There are 2,600 logging engines (donkeys) used by companies operating logging railroads in the territory embraced in our survey. Other equipment totals as follows: Overhead systems, 240; steam shovels, 50; locomotive cranes 32; steam skidders and loaders, 63.

The combined daily capacity of logging concerns in the West operating logging railroads is aproximately 60,000,000 feet, requiring a total of 55,000 men.

Chain Drag Saw and Log Measuring Device

By W. D. Starbird, reproduced from The Timberman

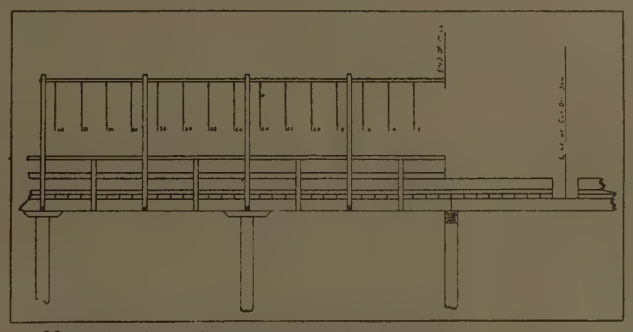
I have recently had an opportunity thoroughly to try out the merits of the chain saw for cutting up long-length logs on the log deck of a sawmill, and will endeavor to give here a description of this and other devices made use of in connection with it, and a few suggestions regarding its possibilities and purposes to which it may be applied.

Some years ago a concern, whose name I have forgotten, secured a patent, or at least applied for one, and undertook the manufacture and sale of a chain saw machine, designed for the special purpose of cutting up long-length logs in a sawmill or on a mill pond. One of the machines was installed by the Potlatch Lumber Company, at Potlatch, Idaho, where it first came to my notice and aroused my interest. This machine has been in use for several years now, and, while it was not an entire success as originally built, it has, with a number of improvements made by the operators, developed into a quite satisfactory machine for the purpose intended.

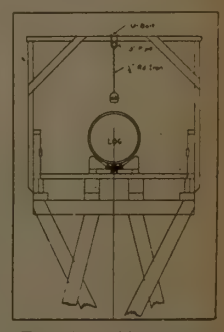
Construction of Chain Saw

The chain saw is built up of segments of band-saw steel, riveted together and having cross-cutting teeth and rakers on the cutting side and lugs or sprocket teeth on the back edge. For use in cutting up logs, it is driven by means of a specially-designed sprocket, mounted on a shaft, driven either by motor or belt and stopped or started by use of a friction clutch. A suitable frame is provided on which to mount the shaft, with a guard to prevent the saw from doing damage in case it breaks.

In order to make the saw practical and satisfactory in operation it must be supported and guided through its length. For this purpose a blade built up of two pieces of band-saw steel, about 14 gauge, with a filler of the same material somewhat thicker, all riveted together, has been utilized. The lugs or sprocket teeth slide in the groove left by the filler plate of the blade being cut below the outside or guide plates. The chain saw, being made up of alternately three and then one segments of steel, leaves every other section of three thicknesses the same as the guide blade, so that the back of each alternate section of the saw blade rests on the outer pieces of the supporting guide blade. The guide blade and the saw can be made any length desired.



Measuring device for determining the length of logs as they are being drawn into the mill.



End view of log measuring device showing details of construction.

At the outer end of the guide blade a loose sprocket is attached by means of a light casting, which is provided with an automatic take-up and spring tension. This casting also provides a guide head, which slides loosely and freely in guide bars fitted to the circle required by the length of the saw and blade. The spring tension keeps the saw strained to a sufficient extent to prevent its buckling and jumping off the top or slack side, which it has a tendency to do when traveling at a high speed. The guide blade and saw are raised and lowered by means of a flexble wire fastened to the cast head attached to the outer end of the guide blade, brought up over sheaves and down to a small drum with crank attached, which is used to wind and unwind the rope, and placed in a convenient location for the operator to handle on the frame supporting the drive shaft. The drive shaft acts as an axis on which the guide blade swings. This makes up the equipment of the chain saw machine.

To utilize this machine or similar device on the log deck of a mill, in cutting up long-length logs, when brought in by means of an endless chain and slip, provision must be made for stopping the log accurately, at any desired length, without delay. For this purpose a machine has been designed which works quite satisfactorily if kept in proper adjustment. Heavy iron bars are set at the desired distances from the saw blade, with a substantial cast-iron guide plate fitted on the side of the log slide. There may be any number of these bumper bars, and each one is connected to a clutch arm, fitted loose on a shaft of the required size and length, on which they are held in position by a solid collar. The bars are each two feet apart, and between each two clutch-arms there is placed a sliding clutch to match them, fitted with feather keys to the shaft. The shaft is turned the distance required to push the bumper bars upward sufficiently to catch the log, regardless of its size, as it is carried forward by the haul-up chain, by means of a

steam cylinder controlled by the operator at the chain saw machine. Each of the sliding clutches is provided with a yoke for holding them in position and moving them to engage or disengage with the loose halves which operate the bumper bars. The bumpers are set for any length of log desired by means of levers located within convenient reach of the operator of the chain saw machine, which are connected with the clutch yokes in any manner found most convenient for each particular installation.

Handling the Log

For holding the log in a rigid position while being cut off, log grips, consisting of four heavy cast-iron jaws with wrought teeth, are used. The jaws of these grips are four in number, two on each side of the chain saw, one being on either side of the log. They swing on a shaft set, one on each side of the log slip, and are closed and opened by means of a steam cylinder, controlled by a foot treadle placed within convenient reach of the chain saw operator.

This makes up the equipment on the log deck, but in using this method for cutting up long-length logs the writer found that it was very difficult to get the logs cut to the best advantage without some means of telling the exact length of the log to be cut up, before it was placed against the bumpers ready to saw in two. An effort to have the logging department mark the length of all logs in the woods brought out the fact that it was impracticable o do so, on accoun of the expense and trouble it would cause.

The Measuring Device

Therefore, a measuring device was finally built over the log slip, commencing 12 feet in front of the chain saw machine and extending to the required distance to cover the length of the longest log handled. The accompanying sketch shows the method of its construction.

For handling long logs and cutting them to length inside the mill it is necessary to have the log slide built level for some distance before the log reaches the cut-off saw, usually for about the length of the

Chain drag saw used by the Great Northern Lumber Company.

longest log to be handled. The log slide should have, and usually does have, a walk along each side, with a railing on the outer edge about three feet in height. A framework is built up along this railing with cross girts overhead at a height of about nine or ten feet. A piece of two-inch steam pipe is suspended from the under side of these girts by means of U-bolts, commencing at a point 10 or 12 feet from the cut-off saw and extending the required distance to cover the length of the longest log to be handled. A hole is drilled through this pipe every two feet, and an eye-bolt with a piece of half-inch round iron, having a marker plate attached to its bottom end, is attached. These rods, which hold the marker, extend down to about four feet above the bull chain, and both the rod and the marker are attached in such a manner that they swing freely in either direction. This brings the marker close enough to any size of log to indicate its length at a glance, and, in the case of an exceptionally large log, the marker can swing freely out of the way. The operator of the cut-off machine necessarily has to stand back from the log slide some distance, and the angle of his vision in looking out over the length of the log is such that he can readily determine how long it is, by means of these markers, without leaving his position, and thereby judge what length to cut the logs into, without stopping the chain.

The combination of these four devices makes up a very complete equipment for the cutting up of long logs on a mill log deck, and if properly installed and kept in working order will prove very satisfactory in operation.

Plate With Inserted Teeth Suggested

The weakest point in the chain saw is the rivets which fasten the separate segments together. They are subject to considerable strain and wear, and when worn to a certain extent are apt to shear. It has seemed to the writer that there is a chance for important practical improvement in the method used for connecting the segments, and also that a plate with inerted teeth might be utilized to good advantage, making the saw blade practically indestructable. This would be of special advantage if a means for connecting the links or segments of the chain saw were improved, so that there would not be the present difficulty of rivets wearing and shearing.

If these difficulties were overcome, I believe there would be a much larger field for the chain saw. It is light and can be made portable to much greater advantage than any other wood-sawing device. It is flexible, and does not require any great amount of power to operate. The power it now requires can be greatly reduced by means of improved rivets and inserted teeth, which would permit the use ot thinner material in its construction and consequently less swage or set. There would seem to be a field for it in the woods for felling timber, specially large timber, and for bucking up on landings. Also for cutting up shingle bolts and all lengths of wood for fuel. There would no doubt be many other uses to be found for it as fast as its practicability could be demonstrated, and about which I think there is little doubt or question. One notable feature of the chain saw is that it can be operated horizontally as well as vertically.

By the use of electrical or gasoline power the chain saw could be utilized to the very best advantage for cutting up long logs on mill ponds instead of in the mill. A cheaper installation with much less equipment would answer the purpose on the pond.

Fresh Vegetables for Lumber Camps

Anyone who is acquainted with the difficulties connected with the labor problems in lumber camps knows that conditions to-day are such that only the greatest possible consideration for the welfare and comfort of the camp employes can be counted upon to attract and to keep them. Comparing the camps of the old days and their rough and ready, but extremely unpleasant, accommodation and poor food. with the camps of to-day, the improvement that has been brought about is at once recognized. With such a labor market as that which now exists, it has become all-important to pay great attention to these matters. A glance through the advertising columns of the Canada Lumberman will quickly convince anyone that many a man living in the cities in want or discomfort would be better off by far if he went to a lumber camp. The variety and high quality of the meals furnished in the lumber camp to-day would astonish anyone who was acquainted only with the camp menus of a few years ago. In fact, there is no laboring man in Canada who fares better than the lumber camp employees.

An indication of the way in which this variety of food is secured is afforded by the advertisement of the firm of Duncan's Limited, wholesale fruit, produce, and commission merchants, North Bay, Sudbury, and Cobalt, which appears in this issue. This enterprising firm makes a specialty of furnishing fresh vegetables to lumber camps, and is prepared to ship in mixed cars for immediate use or for winter storage. Potatoes, cabbage, carrots, turnips, beets, and parsnips are a few of the many lines they handle. It will pay camp managers who wish to feed their men well and to give their camps a reputation for good meals to get in touch with this firm and learn how it can be of service to them.

Saw Manufacturers Busy

Mr. H. J. Cooper, sales manager for R. Hoe & Co., saw manufacturers, New York City, recently visited the company's trade friends in Ontario, and while in Toronto favored the Canada Lumberman with a call. Mr. Cooper reports that business in the saw line is good, indicating a healthy activity among lumber manufacturers and woodworkers. As an indication of this he said that while his company could usually find an opportunity, during the summer months, of catching up with their orders and getting squared away for the increased business which comes in the cold weather, they had not had such an opportunity during the present year, as business had been too active. Lumber manufacturers in the United States, he reports, have been very busy, particularly since the government came into the market with its large requirements for the erection of cantonments and construction of airplanes, wooden ships, etc., and he foresees continued activity ahead of the industry for an indefinite period. To some extent, however, this activity may be restrained by the great shortage of labor which is now being increased by the drafting of men for the armies of the United States and Canada. Mr. Cooper is well pleased with the trade situation in Canada, reporting that, in spite of th absorption of the country's efforts in the war, there is a steady and encouraging market for all kinds of saws and saw parts.

H. W. Baillie, president of Canadian Aeroplanes, Toronto, has been on a visit to British Columbia investigating the question of spruce supply. He went north to the spruce districts. He said that much of the spruce from Washington and Quebec was being used for aeroplane work, but the British Columbia material, with its greater length and greater diameter was exactly what was wanted.

A Splendid Example of Patriotism

Seven Sons of G. D. Campbell, Weymouth, N.S., Volunteered —Six to the Front—One Pays Supreme Sacrifice

From time to time it has been our privilege in the Canada Lumberman to tell of the patriotism of members of the lumber industry who have taken their share in the European struggle, and, all too frequently have laid down their lives in the fight. No more stirring tale of patriotism has come to light since the war began than that afforded by the members of the Campbell Lumber Company, Limited, Weymouth, N.S. The six sons of Mr. Campbell, who went to the front are Lieut. Glidden Campbell, 85th Highland Brigade, C.E.F.; Corp. J. Duncan Campbell, 87th Highland Brigade, C.E.F.; Lieut. Kenneth A. Campbell, 42nd Black Watch, Royal Canadian Highlanders; Gunner Thomas B. R. Campbell, C.F.A., 3rd Toronto C.E.F.; Driver Albert M. Campbell, C.F.A., 58th Howitzer Battery, C.E.F., and Lieut. Colin G. P. Campbell, M.C., 5th Canadian Reserve Brigade, R.F.A. No less than 120 employees of the company also joined the colors.

Lieut. Glidden Campbell has since been promoted to Captain, and Gunner Thomas B. R. Campbell is now in hospital, and the other sons are in active service at the front. The story of the six soldier sons is told in a letter from their father, G. D. Campbell, to E. F. Perry, secretary of the National Wholesale Lumber Dealers' Association, of New York, in which Mr. Campbell says:

Dear Sir: Replying to yours of the 15th, I have to say that not only the members of the firm, but six of my sons are in the war. My sons are grandsons of a brother officer of Lee, Grant, and Franklin Pierce in the Mexican campaign in 1848, who was wounded twice at Churubusco or Chapultepec and Contreras, and they are also great, great grandsons of officers who fought in the Revolutionary War both on the king's and patriots' sides of the contest.

All seven of my sons volunteered for the war, but I kept the eldest home to keep the business together and take care of the property—like David, "to keep the stuff."

At Vimy Ridge Kenneth was killed, Duncan wounded and Glidden went through the thick of the fight with distinction and helped to win that section of the front. Colin was first wounded at LeBasse, June, 1915, and received "multiple wounds" in July 18, 1916, when he won the Military Cross at Death Valley beyond Crucifix Hill near Courcelette.

My six sons made up a total of fourteen cousins in the war in 1914 and since the United States has come in three more cousins have joined, making seventeen cousins in all, fifteen in the army and two lieutenants in the navy. Three of my sons have commissions and not a man of the fifteen was in the army before the war; but all responded to a man when the Beast and his Huns struck inoffensive but brave little Belgium. Surely the spirit of those who bled and those who died at Charleston in 1781, in the Peninsula in 1800, in Belgium when the "Scourge of Europe" was brought to book, at New Orleans in 1814 in "Jackson's Defense," and in Mexico in 1848, is not shirking in 1914 in the present struggle of duty and sacrifice for freedom's cause and against aristocratic brutality or the divine right of Kaiserisms' Kultur.

Verily, gentlemen, "It is the spirit that quickeneth" and surely, surely the flesh profiteth nothing unless so animated by the example of our fathers who struggled upward from the Magna Charta to the Marne, Courcelette and Vimy Ridge.

Surely the time has come when the order given by the Great Commander going Himself to Calvary with but two swords in His little company, which to me all the three-score years of my life has been utterly incomprehensible, is now made plain, when the utterly helpless have been so ruthlessly struck; "Him that hath no sword let him sell his garment and buy one."

Yours very truly,

G. D. CAMPBELL.

P.S.—My sons, reared in cleanliness and comforts of plenty, have written from the front and hospitals of fighting through filth and stench, of "men unburied for three weeks" and of horses lying until their bones bleached ere the ground could be won; of the only water to drink drained from such battlefields, of lice in the trenches from which there was no escape, until, as Duncan writes, he thanks God for the three wounds that sent him to the hospital and "a clean bed once more." Covered with mud and amid the roar of guns, two of them took the Sacrament together before "going in" at Easter and the only thing, animate or inanimate, that was clean was the "fair altar cloth."

Suggestions by a Saw Expert

A saw is very much the same temperament as a child. Its future depends largely on its early training. To be more explicit, if a saw is ground carefully and accurately and the blade is put in A1 condition before it is allowed to make its initial run, that saw will give better service throughout its entire life than one that was allowed to go on the mill before being thoroughly ground and benched.

I have always made it a rule to pay particular attention to fitting a new saw, and what is just as important as putting it in perfect condition before its debut on the mill is to go over the blade every run for at least one week, or until you are confident it has become thoroughly "seasoned." (It is unreasonable to expect the manufacturer to fit saws at the factory so that they will conform to the peculiarities of each of the many thousand mills now in operation.) Of course, there is no fixed rule for the proper time of benching; this depends almost entirely on the make of the mill, the condition of the wheels, and many other things too numerous to mention here; but, under ordinary conditions, I am opposed to too frequent benching. Put the new saw in A1 condition, look it over every run for a week or ten days, and it will not be necessary to bench it more than once or twice a week thereafter. Too frequent benching will make a saw prematurely old.

From my point of view, the most important part of filing is the proper care of the teeth. A saw that has a good, sharp, uniform tooth, with plenty of clearance, will make good lumber, even if the tension is not perfect; on the other hand, if the tension is perfect, it will not make good lumber if the teeth are irregular, out of alignment, or swaged poorly or not properly ground. Right here I want to say a few words in regard to that most important of all machines used in the filing room, the grinder.

A saw, to do the maximum work, must be accurately ground, and to do this the grinder must work perfectly; therefore, I have always made it a rule to go over the grinders thoroughly at least twice a week, cleaning them thoroughly and making sure the most inaccessible parts are well lubricated. If this rule is adhered to, you will undoubtedly see the results of your labor in the finished board.

Of course, the swage and shaper play a very important part in the proper upkeep of saws, as there is nothing that tends to weaken a saw as much as a poor swage. Good, sharp corners are absolutely essential for the manufacture of good lumber. Quite often a poor swage is the direct result of the grinder working badly, as there is no swage made that will do good work if the points are case-hardened, if the tooth is too heavy or too slender just back of the points, or if the face of the swage on the tooth is not ground perfectly square.

There are several—in fact, numerous—reasons for a swage working poorly that are traced directly to imperfect grinding. Taking all this into consideration, I do not think I am far wrong when I make the assertion that the grinder is one of the most important tools used in the trade. One of the chief characteristics of a grinder that is not working properly is an irregularity of gauge at the points—that is, on a fourteen-gauge saw, for instance, some points will gauge eight, while others will gauge nine or ten. This necessitates too frequent swaging, which, in turn, will quite often cause a crystalization of the points; every filer knows the result—an epidemic of "crumbling," which is very annoying to say the least, as it means bad lumber and is very trying on the blade.

I have said in my opinion the proper care of the tooth is the most important part of the trade, but, as a matter of fact, each and every detail of filing is an important one, and one that can't be "half done"; in fact, those who have made a study of the business of filing and are also familiar with other mechanical trades, such as electrical engineering, steam engineering, etc., will invariably acknowledge that the first named is decidedly the most scientific.

To verify this assertion we will draw a comparison between the two trades, electrical engineering vs. saw filing. It is a proven fact that an electrical engineer who can wire an office building in San Francisco in accordance with the specifications, etc., can also wire an office building in New York; but a filer who is considered an expert in the West will find conditions in the East quite different, and many details will confront him that are materially different from those in the West, which will call forth every particle of ingenuity and mechanical ability to overcome; this is also applicable to the filer who migrates from the East to the West, as is quite often the case in changing positions even when the mills are located within the same state.

There is no higher mathematics entering into the study of filing, but it requires several years of actual, practical training a good bit of resourcefulness by one that is a natural mechanic to master the trade. —R. R. Hazlett, in the Simonds Guide.

U. S. Lumbermen Admire B. C. Methods

The coast British Columbia manufacturers are a sane lot. They found that the log supply was mighty scarce and orders from the prairies were not coming in very fast, so they decided to slow down to five days per week for a while and let the supply of logs and orders catch up. The mountain mills are still working six days, owing to their short season of operation. The fir manufacturers of Oregon and Washington could well afford to take a leaf out of the book of experience from their British Columbia brethren. The same conditions are facing the fir mills on this side of the line. Nine months' operation, taking one year with another, is quite sufficient to supply the market. The twelve months' mill simply shuts the other fellow down sooner or later. The demand fixes the output in the long run.—The Timberman, Portland, Ore.

Building Associations and Lumber Trade

Retailers and Manufacturers Urged to Adopt Plan for Promoting Home Building and Owning in their Communities

By J. R. Moorehead*

It is in the mind of every well-balanced man to own a home. Particularly is this true when he becomes the head of a family. This desire is no greater in the head of the family than his wife, and their growing children. This has been true in all ages. Whether this home has been a tent of grass or skins; a stone house carved in the cliffs; an Indian tepee, or a modern bungalow,—the desire has been the same.

There is no necessity for arguing whether the Building and Loan Associations have been a success. We have only to point to the city of Philadelphia, which is known as the city of homes, due to the early development of the Building and Loan Association. Other cities and states have so progressed in this direction that hundreds of millions of dollars are loaned largely for the purpose of procuring homes for those who would not otherwise be able to obtain loans and, through co-operative effort, satisfy their desires.

There are many plans. While the fundamentals are much the same, yet there is a wide difference in detail as to form and manner of conducting such organizations. What we shall have to say at this time does not apply to the smaller communities where lumber yards are located and where the business of that community is largely, if not wholly, dependent upon farm trade. The Building and Loan Association has not yet been applied or adapted to any general use by farmers for obtaining loans for purchase, improvements and other purposes.

The present is one of the most opportune moments in which to discuss the possibility of the Building and Loan Association, insofar as it will increase the sale of lumber and building material and thus promote our business. It is entirely with a view of bringing this matter to your attention at this time in order that plans may be laid for better securing the foundations and future of the lumber business.

Promoting and Securing Trade

It should be the aim of the retailer, not only to secure the lumber bill in sight, but to do and perform those things which will bring business in the future. If we have not this foresight and eye to the future, then we have missed one of the principal factors in the success of our business. Only in well-laid plans for the future can we hope to succeed, and it is with this in view that we lay before you under this caption some suggestions which appear to afford a means of co-operation that will result in greater and better business for all branches of the trade in years to come.

In the success of a properly conducted Building and Loan Association, we can see the success of those other agencies now being employed to promote the sale of lumber and building materials. Plan books and selling helps will become more valuable and indispensable when we provide the finances.

The great problem in most communities is that of securing funds by those not in possession of sufficient finances to obtain their own homes. Banks do not and cannot lend money on long time to home-builders. Funds are not obtainable from other sources for such purposes, except occasionally, possibly, from private sources. The deposits in the Savings Banks may reach the millions, but these small earnings are not available for the purpose indicated in this discussion, particularly the obtaining of funds for the building of the small home for the wage earner, the clerk, and the business man in the small community, without sufficient funds. To create sufficient funds, therefore, seems to be the problem, and the Building and Loan Association is the only means whereby an accumulation or collection of small earnings can be obtained upon terms equitable and possible to the borrower.

The other difficulty seems to be the lack of any one in the average community with sufficient knowledge of details to inaugurate and start a Building and Loan Association. We believe it is possible for the Manufacturers' and Retailers' Lumber Associations to solve this problem.

A Practical Plan

Personally, we have always depended more upon experience than upon theory as to how problems of this kind should be solved. Thirty years ago in my home town, I was one of the promotors of a Building and Loan Association. For five years I was secretary of this association and conducted it in my lumber office. Today that association has assets to the amount of $490,000. The expense for the past year (the largest business in its history) was, including salaries and for every purpose, $2,418. I do not recall a bank with a like capital and assets which conducts its business for an expense less than three times this amount. The very first loan made by this association in 1887 was for the purpose of building a home for a blacksmith, and at least one lumber yard in my community immediately began to get beneficial results from this organization, though only thirty days old. During the thirty years of the existence of this organization, so far as I recall, the association has suffered only one financial loss, and that an amount of less than $400, which means practically that in the thirty years' business, this association has lost nothing, because of bad loans.

In the Building and Loan Association the normal hazard is practically eliminated, and the moral security is practically as great as the real estate.

When this organization was first started, there was intense opposition on the part of the banks in the community, it being intimated that a scheme was now being started to lose a considerable amount of money of working people, who could ill afford it. There was fear, no doubt, that it might interfere with bank deposits. It does not. On the other hand, it increases bank deposits. Small sums come out of socks, tin-cans, etc., and thereby get into the banks. Within three years from that time, every bank in the community had a candidate for treasurer of the organization.

We are not prepared to say just the number of homes which have been erected with the money obtained through this co-operative effort, but we can safely say that the lumber and material men of the community, where I formerly lived and still own a yard, have had their business increased anywhere from ten to forty thousand dollars each year by reason of its existence, and, had not such an organization been formed in my town when it was, the community today would not have reached that stage of development which it has; the mechanics, and laboring people, and business men as well, would not have been living in their own homes, as they are today, and, further, I should not have continued in business there myself.

The community, if it had improved to any extent, would have been one largely controlled by landlords, instead of home-owners. Now, hardly anyone lives in a rented house.

A Paying Proposition from the Start

My proposition, therefore, to the combined lumber industry of the country, to the manufacturers and the retailers, is this—provide a proper number and finance a sufficient number of men with sufficient knowledge to go into any community and properly guide those interested in the organization and installation of a Building and Loan Association. I do not mean that the National Lumber Manufacturers' Association should bear all of this expense. Any retail lumberman in any community where an association is established can afford to pay out of his own pocket at once anywhere from $100 to $500 in order to start such an organization under proper instruction. If by the investment of such an amount, an additional business of five, ten or perhaps twenty thousand dollars a year can be secured for his yard, he can have no better investment.

My own experience is the warrant for making such a statement. There is everything to gain and nothing to lose. If I were the owner of ten, twenty, fifty or one hundred retail lumber yards, I should employ the best Building and Loan man obtainable and have him make a survey of every community where I owned a yard with a view to establishing a Building and Loan Association therein. I would call together my competitors and other business men, including the local newspaper men, in the community, who are as much interested as is the lumberman, and present the proposition to them in a practical, straightforward business way. If I could secure the co-operation of my competitor, well and good; if not, I should proceed on my own account, and install an association in my lumber office. Any retail lumberman who is looking to the future cannot but see that this would be building a future business.

It is of very little importance what rate of interest Building and Loan Association members pay. It may be very large, but if all pay the same, there is no burden. The larger the interest, the quicker the maturity of the stock and the sooner does the home-owner come into entire possession of his property.

Frank L. Nash, manager of the Shingle Agency of British Columbia, Vancouver, is beginning the publication of a daily market report to members of the agency. Mr. Nash was formerly of the American Lumber Company, Seattle, and succeeded Mr. R. Hyde, who has taken the position of sales manager for the Huntting-Merritt Lumber Company, Eburne, B.C.

* Secretary-Manager of the Southern Lumbermen's Association, Kansas City, Mo. Extracts from an address before Lumber Retailers and Manufacturers at Chicago, October 10th.

The Passing of the Carpet

By W. L. Claffey

A PROMINENT physician in a lecture on sanitation once said, if the old-fashioned carpets, which cover the entire floor, were eliminated and oak floors and rugs used, that the health of the family and community would be greatly improved. The carpet is the champion collector of dust and germs, and to keep a carpet thoroughly sanitary it would be necessary to wash it or steam it every week or two, and, of course, this is not practical, so the best thing to do is to get rid of the carpet. Anyone who has been around a spring cleaning and caught a view of the dirt which has sifted through the old-fashioned carpet was certainly appalled at the sight.

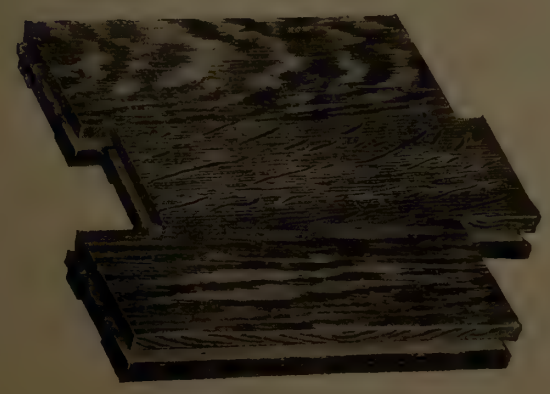
The manager of a rug department of a large department store remarked recently that they practically have no demand for the old-fashioned carpets for covering the entire floor. The carpets that they do sell are usually for runners, or are made up into rugs. This can easily be verified when visiting other peoples' homes, where you will invariably see oak floors and rugs. A recent survey in Chicago in three square blocks revealed the fact that 95 per cent. of the houses or apartment buildings had oak floors and rugs.

Women are responsible for the modern oak floor and rugs. They were quick to recognize that oak floors and a few choice rugs created an artistic appearance and simplified house-cleaning and housekeeping. With the advent of the apartment building, which meant rented apartments, and the unstable tenantry, the old-fashioned carpet had to be cut and fitted almost every time the removal period came around. This made great inroads into the expense account. Rugs of any reasonable size will always fit in any house or in apartments.

Nearly everything these days is based upon appearance. When an owner erects a home, the first thought is, how the building is going to look from the outside. After this the details of the arrangement of rooms, the flooring, the finish, the furniture, the rugs, and the drapes. All are given special attention in order to get the proper artistic effect. Some of the department stores in large cities have unique ways of exhibiting furniture, rugs and drapes by actually building a small cottage in their stores and equipping it completely from the kitchen to the living room. Visitors in this way oft-times get very valuable suggestions for their home.

The modern oak floor is the result not only of a long process of evolution, but also distinct changes in the ideas of living. Oak floors are also responsible for the re-arrangement of rooms in the modern house, such as eliminating the parlor, the location of the dining room in front of the house, the breakfast room, the garage in the cellar, etc. One innovation leads to another, and women get the blame, at least from the architects and builders. Oak floors today have ceased to be a luxury, due to quantity manufacture; in fact they have become a necessity in every home, from the mansion to the small modest cottage. Oak flooring is peculiarly suitable for homes, as its color is a rich brown and blends perfectly with all kinds of furniture and decoration.

There is many an old house today that remains unrented because the old pine floors look very shabby and uninviting. If the owners of these buildings would lay 3/8 in. oak flooring over these unsightly old floors it would undeniably make a splendid investment. It would attract a better class of tenants or buyers, and would increase the renting or selling values. A floor is the very first thing that you observe when entering a building, and about the last thing that you see when going; in fact it is the most important part of the interior construction.



A sample of oak flooring.

Astute landlords will invariably emphasize oak flooring in the daily papers when they offer their house for rent or for sale. This gives the impression that the house is modern, and that all the other material used is of a high class standard.

The average home builder, and even the contractors, are often misled in regard to prices on oak flooring. Comparative prices clearly indicate that oak flooring is by far the cheaper.

A fair average price for a good body Brussels carpet would be about $2.50 a carpet yard. A carpet yard contains 6¾ square feet. Let us figure it out for a home having a living room 14 ft. x 14 ft., a dining room 14 ft. x 14 ft., and a hall 8 ft. x 11 ft., or making a total of 480 square feet. This makes 71 carpet yards, and at a price of $2.50 a yard it amounts to $177.50.

This same space, 480 square feet, with 3/8 in. x 2 in. clear plain white oak flooring, which is the very best grade in this thickness in the plain stock, can be bought, laid, scraped and finished complete for $88. This is $89.50, or 100 per cent. less expensive than the old-fashioned carpet. There are two other grades in the plain stock that could be used that would be even more economical than the clear stock. If 13/16 in. thickness clear plain white or red is used about 30 per cent. more will cover the cost. This thickness is used chiefly in new buildings, whereas the 3/8 in. thickness is used extensively for remodelling old houses that have old pine floors.

The prices of the carpet and oak flooring were based at Cincinnati, and were offered by a reputable department store and floor layer.

Profitable Winter Work

During the slack season or winter months, 3/8 in. thickness oak flooring offers an excellent opportunity for carpenters and builders for laying in old homes where old pine floors are in use. Some canvassing is necessary to secure jobs, but when the work is started the entire neighborhood soon hears about it. A few floors laid in any neighborhood will bring about an abundant supply of jobs. 3/8 in. oak flooring can be laid in a room without disturbing any of the woodwork except the quarter round at the baseboard, and one room at a time can be laid and completely finished without disturbing the occupants to any great degree. Carpenters taking up this class of work should have complete information in regard to the different kinds and faces of oak flooring, as well as the proper methods of laying the floor, prices from the retail lumber dealer for the stock, nails, etc. A good reputation for first-class work is soon paraded and results in increased business. There has been many a carpenter during the last few years who has taken up this line of work as a sideline, and who has developed into a specialist of laying oak floors in new homes, as well as remodeling and improving old homes by use of 3/8 in. oak flooring.

The manufacturers of oak flooring have books and folders imparting full information on how to lay oak floors, as well as the filling and finishing in varnish or wax. These books or folders are generally distributed by the manufacturers to all the retail lumber dealers, and they in turn generally carry a supply for the free use of anyone who desires them.

Getting the Coin—The Test for a Yard Manager is his Ability to Collect

The September issue of the Mac's Maggie Zeen, the house organ published by the Shevlin, Carpenter & Clarke Company's retail interests, is devoted largely to the subject of collections. Discussing this problem the editors in their introduction have this to say:

"We are planning to make a better cleanup this year than ever before. Primarily, because of the unsettled condition of the business world. Secondarily, because of the great increase in investment caused by the high prices of our stock of merchandise; and thirdly, because we have been too lax in this respect in past years and must get away from this enormous investment of capital in book accounts and notes.

"The real test of business ability in a yard manager will be found not in selling, but in accounting, not in care of stock, but in collecting. It takes a good fellow to sell goods. It takes a methodical, careful man to be a successful accountant. It takes a worker to keep the stock in good condition. It takes a combination of all these with the added qualities of a diplomat, attorney and prize-fighter to make a real collector.

"If we were called upon to design a coat of arms for a collector we would suggest a slung shot and brass knuckles rampant upon a field of soft soap with the motto 'I persist,' for persistance is the greatest stock in trade of the successful collector. One of our star collectors—we are not going to mention any names, but for your information will say he is a widower who sleeps at the office in the summer time—says he always likes to ask a man for settlement every time he sees him. He doesn't care to set a definite date of payment because he might meet up with his victim before the due date arrived and it would physic him not to be able to jar that man up. This man has been known to ask a debtor to settle three times in one day and receive the same number of refusals, but this did not deter him from

going over to that man's house before breakfast the following morning to seek whether or not he had changed his mind over-night. This persistent insistence has educated the people of the community to pay him first, and while they know their credit is good with the company at this point, they also realize that they have an obligation to meet and prepare to meet it when it falls due."

The Time to Collect

In another article, they say:—"When you start to make a debtor toe the scratch, make him toe it square—don't compromise—don't dally—bring him into camp. You make an enemy, if you weaken; a friend, if you don't.

"Conditions are unusual this year. In part of our territory, the crop is exceptionally good. In other parts, it is exceptionally poor. In both cases, we are urging a strenuous collection campaign. Where the crops are good, it is our big opportunity to clean up some of the old notes we have been renewing from year to year. As this may be the last big crop for several years at some of our points, it is our golden opportunity to cash in. Many of our stations should make a complete clean-up this year, not only of successful accounts but notes as well. The man who will not pay his bills now must be forced to do so.

"When the crops are poor, it will be necessary for us to go after our collections harder than ever. The loss of this year's crop may put into the doubtful class the man who owes you. Be on the job first and you will not be the one who will have to wait. It is the man who is persistent who gets his money first and when the debt is paid, you stand a much better chance of getting his business. If a man is good, let him get a loan from the bank, we are not in the loan business.

Good Collections Win Business

"Why do good collections win business? Because a man who keeps his account paid up feels a certain satisfaction in dealing with that concern. He feels quite rightly that he is a privileged person and always welcome. If he lets the account lag, his conscience may haunt him and he is greatly tempted to go elsewhere for his lumber until his account is paid.

"But, you may ask, how can I speed up collections? By going after them in a systematic manner. Sending a man a statement the first of the month and then forgetting about the debt for another month is not collecting, and you will be a long time getting the money from many of your customers if you follow this plan."

Forms for Collection Letters

For the use of their agents they have included some form letters to be sent out at periodical intervals.

In concluding, some rules and regulations are given which, it is stated, if enforced, will go a long way toward reducing loss from bad debts. They are as follows:

"1st. Securing a distinct understanding of terms and limits.
"2nd. Handling customers according to their individual situations.
"3rd. Co-operation with fellow merchants.
"4th. Making collections promptly.
"5th. Being impartial.
"6th. Securing new accounts on the basis of additional convenience, instead of the unusual ease with which goods may be purchased.

A Few Proverbs

"What doth it profit a man to do fifty thousand dollars' worth of business if he loses five thousand in bad accounts"?

"A fair and firm credit policy never lost a business house any great amount of worth while trade. On the contrary, it has been one of the best means of building up trade."

"A sale is loss till money is collected."

"It takes a lot of hustling to make things go, but hustling is good for us."

"When some people make a payment on account it is on account of wanting more credit."

"As between the fellow who says too little and the fellow who says too much—more parrots have their necks wrung than owls."

"The consumer with which you deal is essentially honest and if you serve him well he will pay you."

"The man who wants to have his own faults hidden is usually known by his loud complaints of the faults of others."

United States Commandeers Southern Timber

Admiral W. C. Capps, general manager of the United States Emergency Fleet Corporation, has issued a decree to all sawmill manufacturers in Georgia-Florida Saw Mill Association territory requiring that the manufacturers place at the disposal of the United States Shipping Board's Emergency Fleet Corporation every stick of their manufactured product in sizes of 12 x 12 inches or larger by 24 feet feet or longer, or any sizes 30 feet or longer, and deliver the same, or parts thereof, in such quantities and at such times, and to such persons, as may be specified.

Cost Accounting for the Wholesaler

System that has Proved Its Merits Described by a Wholesale Lumber Manager—All Information Readily Available

I have been patiently waiting for an article on a good, practical cost system that could be used in a wholesale yard, and as I find that the majority of systems outlined by the different magazines are practical only when used in a retail yard, I decided to explain the following system, that has really proved its merit with us.

At the end of each day, week, or month we know exactly how much money we have made, not only an aggregate net profit, but how much we have made on each particular order we have filled, and this same system shows us very plainly which of our purchases are the best, which grades produce the highest profit, and at the same time keeps an indexed file showing exactly who are our customers for each particular grade and thickness, so that when we want to move a certain lot of any one grade we can write to or call on the people who use that grade, and not waste time or patience with customers who use some other grade.

We take an inventory every three months, and the fact that our inventory has agreed with our books in every case shows that we are on the right track. The first step, and the only complicated one, is to arrange a card indexed inventory. It is then necessary to arrive at the actual cost, in the pile, of each of the different items carried. This can be done by extending the amounts of the different items at the present market price, and by the comparison of this result and your lumber account decide as to how much you will have to add to or subtract from these estimated cost figures to make your yard inventory the exact equal of the lumber account, allowing for a 1 per cent. difference either way. Of course, the number of feet, kind of lumber, grade, thickness, location of pile, dryness, and this actual cost price are placed on each separate pile and card.

KIND 1X6 #1 Barn White Pine — ROUGH / DRESSED — PILE 86
CONDITION Dry — GANGWAY 7

DATE	BALANCE ON HAND	PURCHASES: DATE	CAR	FEET	AMOUNT	FROM WHOM	SALES: DATE	FROM WHOM	FEET	AMOUNT	CUSTOMER	REMARKS
6/7	25000	7/1	7440	10672	10000	John Doe						
6/9	35000						7/1	7510	743	13000	J Adams & Co	S2S T&G
6/1	20000						7/5	7520	761	18000	A Johnes	S2S P/S
6/5	2000	7/2	7500	7890	20000	Carter & Co						
7/2	22000	7/5	7510	6473	4000	Julien & Co						
7/5	26000						7/1	7561	809	11000	East Co.	S4S
7/11	15000											

Fig. 1—Stock Priced Record. Standard index card 5x8 inches

BALANCE

GOOD: CAR	KIND	SHIPPER	DATE	AMOUNT	BAD: CAR	KIND	SHIPPER	DATE	AMOUNT
10672	1X6 #1	John Doe	7/1	40.15	9333	1X10 #2	Carter & Co	7/2	20.25
7890	1X6 #1	Carter & Co	7/2	60.20	6447	1X12 #3	Johnson & Co	7/4	40.60
6243	1X12 #3	West Co	7/3	14.60	5327	1X6 #1	White & Co	7/5	36.70
				114.95					97.55
				97.55					
				7.40 absorbed in inventory 7/15					

Fig. 2—Balance card. Standard index card 5x8 inches.

WHITING LUMBER COMPANY
Port Huron, Mich.
7/9/17 No. 5178

SHOP ORDER

To Foreman. Work order 7460 as follows

Quantity — Article — Instructions

7000 ft 1X6 #3 Barn S2S C M 5½ face
8000 1X8 #1 " S2S 7¾
7000 1X10 #2 " Phila Lene 9¼ face
22000

Enter All Materials on the Back of This Order

Completed 7/10 1917 Signed Hall Foreman
Inspected by Jarden
Shipped on Order No. 7460

Fig. 3—Work order form, 5x8 inches gross, less about 1¼ inches for binding margin; printed on manila tag stock

For example a card would read:

8/9 20,000 ft. 1x6 No. 1 Barn dry 3 months—pile No. 24—alley 6—$40.

This $40 to us would mean the actual buying price plus freight to our yard plus unloading and sorting, plus the piling charges; in other words, $40 is the cost in our piles at Port Huron.

Now one extra card is made out, a balance card, divided in two parts; one part for cars figuring out below our actual cost on stock already in the yard, and one part for stock figuring above this cost. It will be found that unless you are buying on a very changeable market, or have made some extra poor buys, the good and bad side of this card will just about balance at the end of each month.

On the receipt of a car extend each item at your indexed price; deduct this result from your total invoice, plus freight, plus handling and inspection charges, or vice versa. Add each item to the amount showing on its respective card, and place your balance or shortage in dollars and cents, if any, on your balance card. For example, you buy a car of 19,594 feet of 1 x 12 No. 3 and better at $34 f.o.b. a point taking a 20-cent rate to your mill.

Your invoice is	$666.20
Freight, 47,000 pounds at 20 cents	94.00
Sorting, piling, unloading	19.59
Total cost in pile	$779.79

The car develops the following grades that are indexed at the prices placed after them:

14 ft. shaky clear	$40.00	$ .56
1,566 ft. No. 1 dressing	50.00	78.30
2,678 ft. No. 1 barn	45.00	120.51
13,090 ft. No. 2 barn	37.00	484.33
2,120 ft. No. 3 barn	32.00	67.84
126 ft. No. 1 box	29.00	3.65
Total cost according to indexed price		$755.19
Actual cost in pile		$779.79
Cost based on indexed figures		755.19
Balance credit		$ 24.00

Balance to be held until the end of month and absorbed in grades developing in this car or counterbalanced by a car that figiures out with a balance to the good. If, at the end of the month, your balance card does not balance, you can see at a glance which grades are to blame, and, by looking up your stock of those grades, raise or reduce their price per thousand so that you can absorb the difference in your inventory.

At the end of each day the lumber sold from your different piles is deducted from that pile and the purchased lumber added to the pile. Mr. Miller's inventory system explains all this. The name of the customer is placed on the card opposite the number of feet and grade he has bought.

The cost figures from your different cards are placed before the number of feet on a copy of your invoice and extended so that each invoice will show the cost and selling price of each item sold. If you have a planing mill, it will be allowed so much per thousand for each different kind of work it does, and the planing mill credit and freight charges will also be placed on the copy of invoice.

Card Number One

At the top we have printed "Rough" and "Dressed," so that either one can be stratched out, and the correct definition of the lumber left. The first line on this card shows that on May 7 we had 25,000 feet. On May 9 car No. 10672, containing 10,000 feet, arrived in the yard under order No. 7460, billed to us by John Doe. This 10,000 feet was added to the 25,000 feet, leaving a total on May 9 of 35,000 feet. On June 1 we sold the John Adams Lumber Company 15,000 feet at $52, our order No. 7510, ticket No. 743. The lumber was S2S&T&G. This 15,000 feet was deducted from the 35,000 feet, leaving a total of 20,000 feet on June 1; and so on with the other purchases and sales.

It must be understood, however, that not all of these purchases were bought at the same price. Possibly one car was bought at $38, another at $40, and another at $42.

Card Number Two, Balance Card

I do not feel that there is much explaining to do on this balance card. The first line shows that John Doe shipped us car No. 10672, containing 1 x 6 No. 1 barn, on July 1, and after we had extended the different items that developed in this car we found that it amounted to $40.15 more than the total invoice, plus the freight, plus the handling charges. The other side of this card shows that on July 2 the Carter Lumber Company shipped us car No. 9333, containing 1 x 10 No. 2, and after it was extended at the index price of the different items developing in the car it shows that we were $20.25 short.

Figure Number Three, Mill Order

This is nothing more than a mill order giving our mill foreman the working instructions on the car showing the order number and date, and designating the man who inspected the car. Each one of these tickets should be numbered, so that there will be no doubt of your planing mill getting credit for every piece of work that it does. The reverse side of this card shows the number of men, and the number of hours these men worked on that particular order, the rate the men get per hour, the total amount of the wages, and the number of the machine, and, of course, the number of hours the machine worked on the job and its rate per hour. You will note that the men's time figured to $9.50, making a total of $14.25. Now we have a regular list showing the prices that we allow our planing mill for the different kinds of work that it does. In this case we allowed the planing mill $1 a thousand for working this car. There was 22.000 feet in it, and therefore the wholesaler was charged with the $22 for planing mill work, and the planing mill was credited with $22 for the work it did on the order. This shows that the planing mill will make a profit of $7.75 on the work of that particular car of lumber.

Form No. 4 Invoice

This is merely an ordinary invoice, showing the date, order number, the person to whom we sold the lumber, the point to which it was delivered, the car number, and the road to which we gave the car, the number of feet, the selling price of each particular grade, the total invoice to our customer, the weight of the car extended at the rate and deducted from the total invoice, leaving as a result the exact amount in dollars and cents that the customer is to pay us for the car, in this case $964.50. The left-hand side of this invoice or copy of invoice for our regular invoice is made out from this yellow slip, and shows before each item the card indexed price per thousand of that item and the total cost extended at that price, which in this case amounts to $719. To this is added the $22 mill work charge that we must credit our mill, making a total to us of $741. After looking up our time tickets for our wholesale yard, we find that one inspector and two men worked on this order for ten hours, a total handling charge of $4.80. This is also added to the cost, making a total cost of $745.80 on the car; therefore, by deducting this $745.80 from our $964.50 we find that we have made $218.70 on this particular car. Of course, at the end of the month, the total of these profits will merely represent our gross profits, and from it we must deduct the customary office salaries, interest on investment, etc. I hope my explanation will be found understandable, and that some of your readers will be sufficiently interested to give the system a trial.—By Richards Jarden, in American Lumberman.

Whiting Lumber Company
MILLS, FACTORY, YARD AND DRY KILNS AT JUNCTION OF ST. CLAIR RIVER AND BLACK RIVER
Port Huron, Mich., 7/9 1917
Salesman PHONE 5
ORDER 7460
CUST. No. 1640
Sold to American Lumberman Address Chicago, Ill.
Delivered to Same at Pittsburg, Pa. Invoice No. 11575
ALL BILLS DUE 10TH OF THE FOLLOWING MONTH. Via G. Trunk Car G.T. 17645

		COST	CARD COST	FEET	DESCRIPTION	PRICE	AMOUNT
		203 00	29	7000	1X6 #3 Barn S2SCM	40	280 00
		264 00	33	8000	1X8 #1 Barn S2S	48	384 00
		252 00	36	7000	1X10 #2 Barn	50	350 00
Cost Mill		719 00			Phila Leve		1014 00
		22 00		Frgt	34600 lb at 12.6		49 50
		741 00					964 50
		4 80	Yard labor				
		745 80	Total Cost				

Preserve this INVOICE; you will need it to check up your monthly statement

Fig. 4—Office copy of machine invoice form, with private cost figuring extended. Working size about 6x8 inches

MATERIAL USED

DATE	DESCRIPTION	RATE	AMT.	CREDIT
7/9 17	2 men 9½ hours	25¢	4 75	
	machine #6, 9½ hours	1.00	9 50	
			14 25	
		Credit		22 00
				14 25
		Profit		7 75

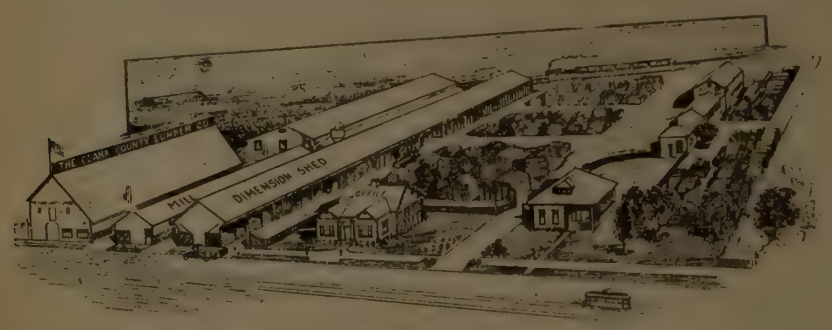
Fig. 3d—Reverse side of work order form

Attractive Yards Draw the Most Trade

Good Layout and Pleasant Appearance as Important to Retail Lumber Business as to Any Other—A Striking Example

During last summer I visited a number of lumber yards and planing mills that had not the ghost of a sign about the premises indicating that a lumber company was within a mile of the place, says a writer in the American Lumberman. The yards looked like lumber yards to be sure, but they might have been storage places for box factories or breakfast food bakeries. A number of times I was at a loss to know where the office was located, and several times I was not sure I had found the place I was looking for. A person hates to go into Jones' office and say "Is this Mr. Skeezick's lumber yard?" It is embarrassing.

There are some stores and hotels in the big cities that make it a practice not to display their names on the fronts. This little mannerism is really an advertising dodge on their part. They advertise so extensively in other and unusual ways that this lack of a name out



Birdseye view of Clark County Lumber Co.'s yard.

in front gives the shopper or the diner an expansive feeling of being a patron of a place so famed and so exclusive that it does not need to resort to the usual methods of publicity. But there are few lumber yards in this class. Not many of them become a household word like the Waldorf. And no great number add any to the volume of business by neglecting to put up a sign on the shed. Some people go to an absurd length in this sign business and paint the place over like a circus poster, listing all the things that are kept for sale and announcing in extravagant phrases the high quality, low prices and valuable service to be found there. Usually this is a mistake. Covering the shed with a wild delirium of advertising literature may interest the folks for a time, but it soon gets tiresome. A man rolling a peanut down the street with his nose may attract much attention the first time he does it, but if he repeated the performance day after day he would soon be suppressed as a public nuisance.

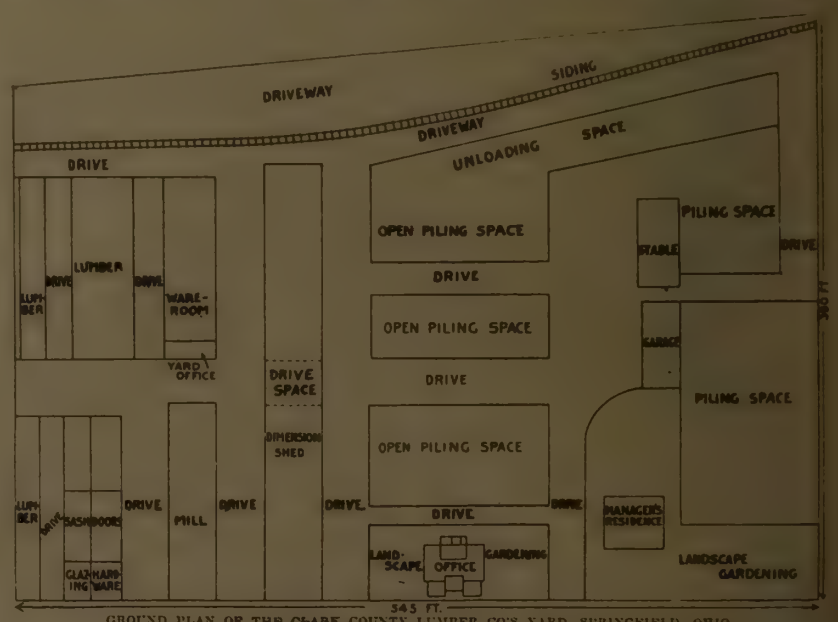
This matter of the sign on the front of the shed is a part of the general problem of the appearance the yard makes. This is rather more important than the old-fashioned lumberman thought. In that respect he has lagged far behind the medical profession. For while your sawbones considers it unethical to advertise more than to put a card in the paper, he has long been an expert at the little game of putting up a front. The Van Dyke beard that luxuriates over the map of many a young M.D. is an effort to assume the appearance of age and learning. The wild dash through town in the new car with not patient at the end of the run is an effort to create the impression of a large practice. We smile at these harmless little ways of advertising and consider them rather legitimate as well as traditional impositions on the credulity of the public. But they can not rank in the same class as legitimate and purposeful advertising with a clean and neatly painted yard front.

A man will keep his sheds and office looking well kept for the same reason that he keeps himself well groomed. Clothes do not make the man, and when we look at some of the affected poses of the men in clothing advertising it makes us almost resolve to wear hickory shirts and overalls henceforth. I saw a picture of George Washington dressed up in modern tailor's product; and I'm sure if the immortal George had ever looked the simp that the artist made him out to be he never would have lived in history. Nobody would have trusted him to post a letter. But if clothes do not make a man out of a fool they generally do indicate whether he has any sense of order and self respect. Presumably some fine fronts are backed by poor lumber yards; but a little investigation indicates that more good lumber yards are concealed behind shabby, slouchy fronts. The Lady Who Travels With Me called my attention to a sentence in a household magazine with the remark that it might apply to lumber yards. "The plainer you are," this sentence ran, "the more intelligent you must be—and the better you must dress."

Lumber yards have been pretty plain. It used to seem impossible that a business that handled such a bulky, undecorative material as lumber could possibly look attractive. This apparently has been a sort of tradition, and no one tried to change it. But it might be well to call attention to another institution that handles as unlovely a product as lumber but that has by tradition become one of the show spots of the town. This is the gasoline filling station. Most of us remember the greasy, unkempt place on the side street where gasoline used to be dispensed. But some enterprising person must have reflected that the majority of motorists are well dressed and clean and that this grease and dirt would not be a drawing card. Then people began making long drives and were compelled to have their tanks refilled in strange towns. Out of these considerations was evolved the idea of a filling station on the main street that would be a credit to its surroundings. Now you see them in every town—an attractive little house surrounded by a trim bit of turf with a gracefully curving drive leading up to the gasoline pumps. Every motorist knows when he sees such a place that there he can get gasoline and oil, and every townsman is perfectly willing that such an attractive station should occupy a prominent spot in the town.

They will be willing that a lumber yard should occupy an equally prominent spot if it looks equally attractive, as it can be made to do. We keep pounding along on this thing because we believe appearance to be important. Of course, it is not one of the prime necessities. But we all insist on a good many things that cannot be considered prime necessities. A few days ago a fat man in a hotel dining room made quite a scene because the waiter gave him a plate still slightly reminiscent of the eggs that had been eaten off it at breakfast. Now a clean plate is a pleasant thing, but it isn't an absolute necessity for the sustaining of life. It is easy to think of situations in which that man would be glad to eat out of a skillet. But none of us is going to eat off a dirty plate if that kind of doings isn't necessary; and in ordinary times a dirty plate is an evidence of laziness and a plain dullness toward the common decencies of life.

We can't say truly that a trim appearing yard with neatly cut grass and well painted sheds and a well kept office will make the difference between success and failure. There are too many other things that enter into the determining of success, and some slouchy lumbermen have become wealthy beyond the belief and experience of a common ink-slinger. But the tendency in these days is away from that sort of thing. Most business men who have endured very long have worked out the commercial details of their occupation to the



GROUND PLAN OF THE CLARK COUNTY LUMBER CO'S YARD, SPRINGFIELD, OHIO

point of passable efficiency. They know buying and stock keeping and salesmanship and collection pretty thoroughly. Of course, they are always working to improve these things. But they are also looking for opportunities to add to the general pulling power of the business; and in the retail lumber trade they are finding it in two things: attractive appearance and selling service. These two things must go together if they are to be effective. Appearance is merely an adjunct of selling service, if you discount the feeling of satisfaction and added self respect the owner has when his place is attractive looking, but it is important. If a man is to graduate from the old idea of merely keeping a stock of lumber and is to begin considering how he can help

his customers to plan better buildings he must look to his own premises. Otherwise he will be told to minister to himself before he tries to advise his neighbors.

So if we talk a good deal about selling service and general appearance it isn't because we think these are the only things worth talking about; it is because we think a good many lumbermen who are efficient in other and equally important departments ought to give considerable more attention to this.

A Concrete Example

The Clark County Lumber Company, Springfield, Ohio, has recently completed a yard that probably is one of the most modern and convenient in the State. The ground plan and the perspective drawing shown herewith will give some idea of the size and arrangement of the place. The Clark County Lumber Company numbers itself among the believers in modern equipment and in attractive appearance. The office is a separate building and planned along bungalow lines. The manager's residence is on the yard grounds, and both buildings are surrounded by lawn that has been carefully landscaped and that is well kept. A picket fence adds to the appearance of the place and also serves to protect the place from casual and uninvited guests and souvenir hunters. In this way the office is slightly set off from the yard without being removed from it to such a distance as to interfere with the true function of offices. I imagine this will have something to do with attracting a certain class of trade. Most women, even incorrigible shoppers, have an aversion to going to a lumber office. They seem to class it as a distinctly masculine hangout like a barber shop or a cigar store. But if the office is in appearance a pretty little bungalow set in a well-kept lawn they will have more courage; a small point, certainly, but not unworthy of consideration.

Each Part Must Be Accessible

Another point to be noticed is the wealth of driveways. One of the problems in arranging a large yard is to make each part accessible. In our effort to leave as much storage space as possible we are tempted to cut down on driveways; we either leave them out entirely or else make one do duty for two and then make it so narrow as to be practically useless. This yard has broad drives crisscrossing it in such a way that a wagon can go directly to practically any part of the yard. Furthermore, there is more than one way out if one important drive gets blocked up with a couple of wagons. The yard office is located at the principal focus of these drives so the yard foreman is able to keep tab on all that goes on in the place.

Stock is divided between sheds and open piling. The open piling space, presumably, is in the nature of an overflow yard. There is a dimension shed that doubtless will take care of a large part of that kind of stock. But there come times when the stock gets extra large in volume, and then there must be an overflow. The practice of piling part of the stock outside is common in Ohio and is accepted as reasonable by consumers. The dimension shed is the longest on the grounds and is made umbrella style so that stock may be taken out from either side. This shed has a drive running crossways of it in the middle. This drive is the opening between the outside piling yard and that part of the yard occupied by sheds.

The garage and stable are isolated at one side of the yard. This is advisable in every yard but not always possible. The yard has its own siding and unloading space, and many of the drives open out into the space. Like most eastern yards this one has a planing mill. This mill is of rather unusual shape, being long and narrow. The glazing and hardware rooms have show windows in front. These windows could be effective nowhere except along the street, of course, but this removes the hardware room so far from the office that it will be almost impossible to develop any casual counter trade. It may be that the company does not care for this trade and is content to sell only building hardware to be used in erecting those buildings for which it sells the lumber.

An address upon "Present and Possible Products from Canadian Woods," by Dr. John S. Bates, superintendent of the Forest Products Laboratories of Canada, which was delivered before a sectional meeting of the Canadian Society of Civil Engineers at Montreal, has been published in pamphlet form. The address contained an excellent review of the subject under discussion, including definite statistical facts and valuable information obtained after extensive investigations at the Forest Products Laboratories. Readers of the Canada Lumberman have already had an opportunity of reading much that was contained in the address, extensive extracts from which were published in a former issue.

Mr. William Rutherford is suggested by the Montreal Citizens' Association as one of the members of a governing committee to be appointed by the Lieutenant-Governor in order to ensure a better business management of the city's affairs. The association has petitioned Sir Lomer Gouin with this end in view.

Registered

N

Trade Mark

FOR SALE

Quebec Birch

6/4 No. 1 Common and Better	5	Cars.
8/4 No. 1 Common and Better	10	"
12/4 No. 1 Common and Better	10	"
8/4 No. 2 Common and Better	5	"
12/4 No. 2 Common and Better	5	"
4/4 Log Run Mill Culls Out	20	"
12/4 Sound Boxed Hearts	5	"
16/4 Sound Boxed Hearts	5	"

Quebec Spruce

2 x 4 x 10/16	Merchantable	2	Cars.
5 x 10/16	"	4	"
6 x 10/16	"	10	"
7 x 10/16	"	2	"
8 x 10/16	"	5	"
9 x 10/16	"	4	"
11 up 10/16	"	5	"
3 x 4/6 x 6/16	Merchantable	5	Cars.
6 x 6/16	"	5	"
7 x 6/16	"	4	"
8 x 6/16	"	8	"
9/11 x 6/16	"	2	"
1 x 4 in. and up 6/16	Mill Cull	5	Cars.
2 x 4 in. and up 6/16	Mill Cull	15	"
3 x 4 in. and up 6/16	Mill Cull	2	"

If any of the above interest you, will be pleased to quote prices

E. M. NICHOLSON & CO.

202 Board of Trade Building

MONTREAL

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) $2.10 per inch, each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Wanted

4 cars Sawdust, 3 cars Spiles, 5 cars Hemlock or Cedar Ties, 2 cars Cull Basswood, 6 cars Cordwood, a number of cars Hardwood or Softwood Slabs. Apply Box 637, Canada Lumberman, Toronto, Ont. 20-23

Maple Squares Wanted

Wanted to purchase for export in 1918 one million feet Maple Squares: 1¼ in., 1½ in., 1¾ in., 2¼ in., 2½ in.; lengths, 12 in., 18 in., 24 in., 30 in., 36 in., 42 in., 48 in.

State price air-dried and bundled f.o.b. cars. State shipping point. Box 625, Canada Lumberman, Toronto, Ont. 18-21

For Sale–Lumber

For Sale

Can make prompt rail or boat delivery of from 3,000 to 5,000 pieces of Jack Pine Piling, from 40 ft. to 70 ft. long.

The New Ontario Timber & Trading Co.,
17-20 Sault Ste. Marie, Ont.

Lumber For Sale

300,000 ft. B.M. 1 x 4 and up Clear and No. 1 Spruce.
400,000 ft. B.M. 2 x 4 to 2 x 10 Spruce. Piled widths and lengths separate.

GEO. C. GOODFELLOW,
c Montreal, Que.

Lumber For Sale

Two cars 2 in. Red and White Birch, 5 to 9 inches, 14/16 ft., log run, mill culls out.

Two cars 1¾ x 4 and up 5th quality spruce.

S. BARKER,
407 Board of Trade Building,
20-20 Montreal, Que.

Dry Lumber For Sale

135,000 ft. 1 x 12—12/16 ft. White Pine.
200,000 ft. 1 x 4 and up, 6/11 ft. Mill Run White Pine.
200,000 ft. 1 x 4 and up, No. 2 White Pine Mill Cull.
200,000 ft. 1 x 10/12 in. No. 1 White Pine Mill Cull.
200,000 ft. 1 x 4 and up, No. 1 White Pine Mill Cull.

The Elgie & Jarvis Lumber Co., Ltd.,
20-20 18 Toronto St., Toronto, Canada.

For Sale

A limited number of cedar Telephone Poles, 25 ft. to 35 ft. long. Also a few cars 8 ft. cedar fence posts, 4½ in. and up at top. For particulars apply Lynch & Ryan Lumber Co., Marmora, Ont. 18-21

For Sale–Machinery

For Sale

One 3-roll 52-in. Berlin Sanding Machine. Used only few weeks.

THE BEAVER BOARD CO.,
20-20 Buffalo, N.Y.

Barkers For Sale

Three curved disc Green Bay Barkers, two large, one small. Suitable for rossing 2, 4 and 8 foot wood. An exceptional bargain.

Address Wayagamack Pulp & Paper Co., Ltd.,
20-20 Three Rivers, Que.

Slab Resaw For Sale

Heavy Horizontal Slab Resaw, Giddings and Lewis Make, 6 ft. wheels, 8 in. saws; used only four months.

FIRSTBROOK BROS. LTD.,
20-23 Toronto, Ont.

For Sale

One 24 in. x 52 in. Gap Engine Lathe, 14 ft. Bed, complete with Independent Chuck. Also Iron Planer, 30 in. x 30 in. x 8 ft. Both of these machines in splendid condition and low price.

WILLIAMS & WILSON, LTD.,
20-20 Montreal, Que.

Machinery For Sale

One 36 in. planer, roll feed, with countershaft.

One Jackson & Cochrane 24 in. planer, roll feed, with countershaft.

One 36 in. two drum sander, Cowan & Co.

R. W. NICHOLSON,
18-21 Strathroy, Ont.

For Sale at Smith's Mills, Que.

1 40 in. Crocker Turbine Water Wheel.
1 75 h.p. Corliss Engine.
1 Clapboard Machine.
1 Waterous Lath Machine.
For price and particulars write

THE VALLEY LUMBER CO.,
19-20 Smith's Mills, Que.

Machinery For Sale

1 Goldie & McCulloch Engine, 16 in. x 38 in. Complete with Heater, Pipes, Oil Pump, etc. In first-class condition.
1 Holmes Matcher.
1 Band Rip Saw.
1 Dynamo Engine, Jewel No. 3.

R. Laidlaw & Co., 65 Yonge Street, Toronto. 19-23

Machinery For Sale

A Light Planer, Matcher and Moulder.
12 in. 4-side Moulder.
Power Feed Rip Saw.
Trim Saw. 12 in. Jointer.
Dry Kiln. Lighting Plant.

A. J. LINDSAY,
94 Pembroke Street,
17-20 Toronto, Ont.

For Sale

No. 5 Double Bale, Geared Screw, Power Shaving Baling Press, manufactured by the P. K. Dederick Sons, Albany, N.Y.

Capacity two bales, about 30 in. x 16 in. x 16 in., weighing approximately ninety pounds each per stroke of machine.

This machine has been in use but five or six months and is in first class condition.

It will be sold at a bargain.

THE DE LAVAL CO., LTD.,
19-22 Peterborough, Ont.

Circular Saws

1 70-in. Circular Saw, 5 and 6 gauge, 2 in. hole, 90 teeth.
1 72 in. Circular Saw, 5 and 6 gauge, 2¼ in. hole, 90 teeth.

Could make alterations in hole, hand or speed to suit. These saws would cost new today $300 each, but we are willing to accept any reasonable offer. Anyone that can use them can secure a bargain.

THE JAMES ROBERTSON CO., LTD.,
19-19 Toronto, Ont.

Wanted–Machinery

Refuse Burner Wanted

Second hand Refuse Burner in good condition, 12 to 15 feet in diameter, and moderate height. Address with full particulars and price.

REAMSBOTTOM & EDWARDS,
20-21 Connaught Station, Ontario.

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

WANTED POSITION as trimmer man, air lift; five years' experience mill cutting, 150 M. daily. Address Z. T. Harlow, Crossburn, Nova Scotia. 18-21

YOUNG MAN, six years' experience as stenographer and bookkeeper in lumber business, desires change. Best of references. Box 629, Canada Lumberman, Toronto, Ont. 19-2

LUMBER OFFICE CLERK, age thirty-six, sixteen years' experience with large lumber firms, as general clerk, would like position in any capacity with chances for advancement. Speaks English and French. Best references. Box 633, Canada Lumberman, 119 Board of Trade, Montreal. 20-20

POSITION WANTED by an experienced lumberman thoroughly understanding woods and mill operations; eighteen years' experience; the last ten years as manager of logging and saw mill plant.

Want to go where there is further advancement for the right man.

Box 638, Canada Lumberman, Toronto, Ont. 20-20

COST ACCOUNTANT, ineligible for Overseas Service, having had four years' experience in Mill Work Costs, and an additional three years as an assistant with one of the foremost Accounting firms of Canada, desires a position where he can control and operate the cost accounts of a large woodworking and contracting concern. Good references. Mr. Howe, 1401 Royal Bank Bldg., Toronto. 19-20

Business Chances

Saw Mill For Sale

Complete Sawmill with timber rights and freehold lands for sale. excellent shipping facilities. Mill situated County of Shefford, with a visible supply of soft wood and hardwood timber in the neighborhood for an extended life. Address P. O. Box 222, Waterloo, Quebec. 16-t.f.

For Sale

Timber Limits and Sawmill, estimated fifteen million feet of hardwood and ten million feet soft woods. Sawmill capacity 25 M. feet, shingle mill 125 M. Docks, tug, booms, logging outfit, houses, etc. Price $35,000.

The Manitoulin Lumber Co., Ltd.,
11-22 Walkerville, Ont

Mill Plant and Limits For Sale

43 Miles Limits on 31 Mile Lake, Gatineau Valley, containing Basswood, Spruce, Fir, Pine, Cedar, Birch, Maple and Pulpwood.

New Waterous 8 ft. Improved Double Cut Band Mill complete. Steam Alligator, Boats, Sleighs, Wagons, Harness, etc. For further particulars apply to

A. W. STEVENSON,
P. O. Box 2624,
8-t.f. Montreal, Que.

Sawmill For Sale

Saw, Shingle and Planing Mill in Bayfield, on Lake Huron, will be sold at a bargain. Practically new and cost over $6,000, and will be sacrificed for $4,500 on easy terms. Plenty of available timber for this mill which will make more money than the best 100 acre farm in Huron County.

This is a gold mine for the enterprising man with small capital. Apply to

JNO. B. MUSTARD,
19-22 Brucefield, Ont.

Valuable Water Power
and 162 Square Miles of
Valuable Timber Limits
FOR SALE BY PUBLIC AUCTION

The limits are on the river, Mississippi Branch, a tributary of the Madawaska, and Water Power at Eganville, Ont., on the Bonnechere River. These will be offered for sale by Chas. M. Henderson & Co., Auctioneers, at their office, 128 King St. East, Toronto, Ont., on October 30th, 1917, at 2 o'clock p.m. The Limits will be offered in three parcels, as follows:

Parcel No. 1—

Comprising parts of the Townships of Mayo, Carlow, and Raglan, license covers in all 65 square miles, a great portion of which is deeded or located lands.

Parcel No. 2—

Comprising two parts of the Township of Cashel in two licenses, covering 18½ square miles, well timbered.

Parcel No. 3—

Comprising parts of the Townships of Ashby and Effingham, in all, 78½ square miles, well timbered. This parcel also includes lots 29 and 30, Con. 10, Mayo, making 100 acres (more or less), on which is located a valuable water power, known as the Big Chute, situated five miles from the terminal of the Bessemer & Barrys Bay Railway.

All this country was cut over some years ago for the pine, of which there is considerable left, along with large quantities of Birch, Maple, Ash, Elm, Hemlock, Cedar, Spruce, Balsam, and Basswood, suitable for sawlogs. also pulp wood, railway ties, and large quantities of hardwoods for chemical purposes and a great growth of young pine.

These limits are close to the Central Ontario Ry. on the West, a branch line of which runs in the Childs Iron Mine in the Township of Mayo, from L'Mable Station. They are also easily accessable from Barrys Bay, on the Grand Trunk Railway.

The Sale will be subject to all conditions and regulations of the Department of Lands, Forests & Mines, affecting same. The licenses permit the cutting of all kinds of timber, except on deeded or located land.

The reason for selling is for the purpose of closing up an Estate.

Terms of sale regarding limits: 25 per cent. of purchase money down, 25 per cent. 1st of July, 1918, balance 1st of July, 1919, bearing interest at 6 per cent. per annum. A liberal discount can be arranged for cash. Transfer of license will be made on final payment, purchaser bearing cost of transfer.

There will also be offered for sale a valuable Water Power, with a cement dam, and the stone walls of a flour mill; the latter was burned in 1911. This is in the centre of a thriving village served by the C. P. R. and G. T. R. Railways, a good manufacturing site.

Terms for the Water Power: 25 per cent. cash on day of sale, balance can be arranged.

Any further information regarding these properties will be furnished by writing the undersigned.

The properties are offered for sale subject to a reserve bid.

GEORGE B. FERGUSON,
Renfrew, Ont.
August 30th, 1917. 18-20

For Sale

About five or six tons of 5/8 and 9/16 tested chain in lengths from 27 ft. to 30 ft. with ring on one end and hook on the other end. Address Drawer "F," Sarnia, Ont. 19-t.f.

Tide-Water Stumpage
For Sale or Exchange

For sale, or will exchange for good ranch or farm land, B. C. Tide water stumpage, cruised and surveyed.

CARL BLOCK,
19-t.f. Peoria, Illinois.

Jobbers Wanted

We wish to let several contracts to take out logs on Berth No. 6, being broken front lying between the Magnetawan and French Rivers. This berth is all convenient to Canadian Northern Railway.

John Harrison & Sons Company, Limited,
Saw and Planing Mills,
9-t.f. Owen Sound, Ont.

TENDERS for Pulpwood Limit

Tenders will be received by the undersigned up to and including the seventeenth day of December next for the right to cut pulpwood and pine timber on a certain area situate in the vicinity of the Kapuskasing River in the Districts of Timiskaming and Algoma.

Tenderers are to offer a flat rate per cord for all classes of pulpwood, whether spruce or other woods. The successful tenderer shall be required to pay for the Red and White Pine on the limit a flat rate of $10 per thousand feet board measure.

The successful tenderer shall also be required to erect a mill or mills on or near the territory, and to manufacture the wood into pulp and paper in the Province of Ontario, in accordance with the terms and conditions of sale which can be had on application to the Department.

Parties making tender will be required to deposit with their tender a marked cheque payable to the Honourable the Treasurer of the Province of Ontario, for Twenty-five Thousand Dollars ($25,000.00), which amount will be forfeited in the event of their not entering into agreement to carry out conditions, etc. The said Twenty-five Thousand Dollars ($25,000.00) will be held by the Department until such time as the terms and conditions of the agreement to be entered into have been complied with and the said mills erected, equipped and in operation. The said sum may then be applied in such amounts and at such times as the Minister of Lands, Forests and Mines may direct in payment of accounts for dues or for any other obligation due the Crown until the whole sum has been applied.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

G. H. FERGUSON,
Minister of Lands, Forests and Mines.

Toronto, September 19th, 1917.

N.B.—No unauthorized publication of this notice will be paid for. 20-24

Active Logging in B. C.

Much activity in the logging industry through British Columbia is reported by Mr. John Peck, chief provincial inspector of machinery, who recently returned from a trip through the North. In particular, large quantities of cedar, hemlock, and spruce are being cut. The pulp and paper concerns are logging a lot of hemlock for the manufacture of paper, and cull spruce is also used for that purpose, while good grades of spruce are being cut for aeroplanes. Contrary to the general opinion, Mr. Peck says there is no lack of labor for the logging camps. If any of the mills are suffering from a shortage of logs it is because of the difficulties experienced by the towing fleets all summer. There has hardly been any decent towing weather this year, he states. Tugs which ordinarily will make a certain trip in ten days have been taking a month. On the way down the coast they passed innumerable tugs, with booms of logs, stormbound.

Mr. Peck speaks enthusiastically of the modern arrangements of the logging camps operated by some of the paper people. They have, for instance, hot and cold shower baths, a room for drying the men's clothes when they come in from the woods, steel beds with spring mattresses, and, in fact, accommodation very much like that of a passenger boat.

Lake Vessels for Ocean Trade

A representative of the United States Shipping Board recently visited Cleveland, Ohio, to initiate government plans to commandeer lake freighters for coastwise and transoceanic war trade. Figures tabulated by the government agent, in conference with local shipping experts, owners, builders, and tug men, show that upwards of 80 lake vessels can be taken to salt water. The Shipping Board's decision will rest upon the report to be made by its representative. The plan is to take every vessel capable of passing through the Welland Canal, and thence through the St. Lawrence River to the Atlantic, before lake traffic is ice-bound. The Shipping Board is now making a list of ships under 260 ft. length and 43 ft. beam, which can pass through the Welland Canal without alteration. Vessels up to 520 ft. length and not more than 43 ft. beam will be cut in two, bulkheaded, and towed by tugs through the canal and river.

Band Saw Rolls

In selecting a stretcher, it is important that it be of heavy construction, and that the roll spindles do not spring when subjected to considerable pressure. The rolls should be made solid and of a good quality steel, and be carefully and accurately ground on true segments of a circle. They must also be in absolute alignment, and be properly crowned, or the result will be unsatisfactory. Cut gears should be used, and heavy rolls geared together be readily reversible in either direction, and be adjustable to any point of the saw. In the best machines a pressure gauge with index and dial is fitted.

PHILIP T. COOLIDGE
FORESTER
Technical training and ten years' experience. Timber Estimating and Mapping. Supervision of Lumbering Contracts. Surveying. Forest Planting.
Stetson Building, 31 Central Street
BANGOR, MAINE

Union Lumber Co.
Limited

White Pine
Red Pine
Spruce
Red and Jack Pine
Lath

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

—if you buy cheap, low-grade tea you are practicing false economy.

The advantages in favour of *good* tea are

Greater number of cups to the pound.
Real flavour.
Satisfaction instead of dissatisfaction.

"SALADA" TEA

is the finest quality Ceylon and Indian Tea that will yield generously and prove more economical in the long run than any cheap, low-priced tea.

The sealed moisture proof packets facilitate storage, transportation and stock inspection.

Many Lumber Camps and Mines favour us with their patronage for these advantages.

In any case write to us for samples and prices.

SALADA TEA CO.
TORONTO

Review of Current Trade Conditions

Ontario

The lumber trade of Ontario still shows an encouraging volume of business in progress. It is a difficult matter to place one's finger upon the actual source of trade, though it is easy enough to point to all the ordinary lines of demand during normal times and to see that they are pretty nearly non-existent to-day. Unquestionably the bulk of the business to-day is to be accounted for in one way or another by the war, which has created many new uses for lumber, some of which seem to be more or less prominent at any given time.

The shell box industry has by no means petered out as some people were inclined to think a few weeks ago. Assurances given by the Minister of Finance in the House of Commons recently that the loans to the British Government for this purpose were to be continued during the winter and probably during the balance of the war now seem to be justified by the fact that new contracts for considerable quantities of 4.5 in. and 6 in. shells are being let, and by an authoritative report that for the 6 in. shell, at least, the board will be placing contracts well into the middle of next summer. Apparently the munition business is simply being altered to some extent in its details, but not reduced in volume. If this turns out to be the case, it will mean much to the shell box business. In addition to the Ontario demand for shell box lumber, there is a strong demand for similar stocks and other war materials in the United States, and much Canadian lumber is going across the border for this purpose.

There is little or no building going on in Ontario cities, but the outlook for country trade is excellent. The farmers are getting a high price for their products, and can be counted upon to spend a good portion of their receipts upon lumber for barns and other necessary buildings, many of which have been allowed to go without repair for some years. Many new farm buildings are also necessary to enable the farmers to keep up with the intensified demand made upon them by the urgent food requirements of the war.

The lumber manufacturing situation is difficult to describe. Undoubtedly the prospect for next year's prices is that they will be higher than they are to-day. That is to say, the cost of operation and the scarcity of labor, combined with the new demand for practically everything that can be produced that is serviceable for war uses may be counted upon to keep prices strong and force them upward; always provided, of course, that no unforeseen adverse influence develops. All the conditions prevailing to-day point in the direction of scarcity and strong prices, but there are a few lumbermen who are talking about lower prices, particularly for spruce and hemlock. Such a belief can only be based at present upon conjecture, and the reasons for believing otherwise are so definite as to outweight the others greatly. Mill men, who are best able to judge the cost of operating and the probable quantity that will be taken out this winter, are talking of an advance of from $4 to $6 per thousand feet between now and next summer.

As for hemlock, there is not sufficient stock in the country to-day to warrant any decrease in prices at present, and the outlook is for a small production this winter. Spruce perhaps is a little quieter, and is the only line about which there seems to be any uncertainty. The market for lath continues quiet.

Eastern Canada

There is no important change to report in connection with prices at St. John, N.B., which still remain firm. People who are in search of stocks cannot find any considerable quantities of 1, 2, or 3 in. spruce, and such stocks as are to be had are being held at $28 to $30 for the 2 x 3, 4, 5 and 6 in. For the 2 x 8 the price asked is from $30 to $32. Spruce boards are scarce at anything under $25. Culls are bringing $15 to $17. Lumber manufacturers in New Brunswick are experiencing the same trouble in regard to the shortage of labor as manufacturers elsewhere, and report that such labor as they can obtain is at least 25 per cent. less efficient than that of a year ago. On top of this, provisions and supplies generally are costing 25 per cent. more. Laths and shingles are quiet. Local business is fair. About 7,000,000 feet of logs remain in the Fredericton booms, but may still come out if higher water comes.

There is a strong demand for shipbuilding timber at Montreal, and the stocks available are not sufficient to meet the requirements. Much difficulty is being experienced in obtaining shipments from British Columbia. All the Eastern shipbuilders are extremely busy. The shell box situation shows some improvement, new orders having been placed recently. Local trade at Montreal is very quiet. The export trade with the United States shows a fair volume of business.

The market for Eastern spruce at Boston is active and strong. Frames are being quoted as follows: 8 in. and under, $40; 9 in., $43; 10 in., $44; 11 and 12 in., $46. There is a fair demand for boards, and the supply is limited. Spruce covering boards 5 in. and up are quoted at $31 to $42, and matched spruce boards at $36 to $37. Quotations on random are very varied, but strong. Hemlock is firm at Boston, the demand being good and stocks light. The demand for boards continues strong. The hardwood trade is very quiet, most of the business being in small orders. Prices are all firm. A very quiet market prevails at Boston for shingles and lath, as dwelling house construction is light.

Great Britain

Very unsettled conditions are still reported in connection with the lumber trade of London. The commandeering of large portions of the available stock, at values much below those now being realized, is causing a lot of comment and dissaproval. Most members of the trade are of the opinion that with the increased supplies received from home grown operations, there will not be as much necessity as formerly for importing a large quantity of stock and that, therefore, the government might see its way to increase the percentage of profit permitted upon colonial imports.

The recent removal of the embargo on neutral steamers chartered under license, which are now permitted to import stocks from America, is looked upon by the trade at Liverpool as an acknowledgement of the imminence of a famine in spruce. Such a famine will, of course, affect spruce not directly held by the government, as it is quite possible for the government to replenish its stocks whenever they are much needed, by making use of controlled tonnage. There is, however, a great shortage, as is shown by the fact that many consumers are obliged to rely on the open market for their supplies, notwithstanding the fact that the timber required is for work of national importance. In view of this situation it looks as though the danger of a famine is recognized by the government and that it is inclined to do what it can to assist matters. Such concessions as have been made, however, have turned out to be of little or no value, and it is hoped that new regulations of a more favorable nature will be passed

It is generally expected that f.o.b. prices for Canadian spruce must increase, though, of course, much will depend on the action of the British Government. If continued uncertainty prevails, it seems certain that a heavy curtailment of operations in Canada can be counted upon as operators will not have any strong inducement to go into the woods. It is known that this situation has already developed and that operations this year are likely to be much reduced for this particular reason.

The labor shortage and the numerous restrictions on imports are the chief factors of the trade at Manchester. The timber trade, however, is fairly brisk and, of course, requirements are considerably greater than available supplies. There is a great scarcity of pitch pine at Manchester, and the demand for it is very strong. Such arrivals as have been reported recently have been almost entirely on government account.

United States

An important effect is likely to be had on the market for Southern yellow pine by the recent commandeering of all longleaf yellow pine 12 in. x 12 in. and larger, 24 ft. and longer, or any sizes in 30 ft. or longer. The demand for timber cutting bills has been exceptionally active and prices have advanced. Railroad companies are still taking large quantities of lumber for car-building material, and it is expected that this demand will continue strong. Unfortunately, most of the timbers required by the railroads are purchased in smaller sizes than those commandeered by the government. Southeastern sawmills are engaged almost entirely on government business, and are rather plased with the light demand from the retail trade. The demand from all quarters except from the retailer is good. Regular fall business is a little behindhand, but a slight increase in the volume of orders placed is shown by the latest reports. There is a good demand for flooring, ceiling, drop siding, and similar lines. Ever since the middle of April shipments of Southern pine have exceeded production, frequently by large margins. Orders have not been equal to shipments, but have been in excess of production. Stocks in manufacturers hands are now below normal, and unshipped orders on hand are above normal. The car supply is commencing to tighten up.

The demand for North Carolina pine has been increasing gradually since the beginning of September, and there is a satisfactory vol-

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

ume of orders now in manufacturers' hands. The government's requirements in this line have been extensive, and are expected to continue for some time. The better grades of rough North Carolina pine have not been selling extensively of late, and stocks at the mills have accumulated. Manufacturers, however, seem to be content to hold rather than make concessions. The outlook for fall business is thought to be good.

Plenty of orders are reported by the Western pine manufacturers, and prices are very firm. Production and shipments are both being curtailed by the shortage of labor. Shipments, however, have reached a good total, and are considerably higher than they were a year ago. Shipments to Atlantic Coast and interior Eastern and Middle Western points have shown large gains.

Many of the Douglas fir mills have resumed operations on a ten-hour basis, and all of them are expected to be operating very shortly. Labor is scarce for the Douglas fir mills and high wages are being paid. Many of the mills are giving $3.50 for common labor. Naturally, therefore, prices are holding firm.

In the white pine list the lower grades are most active. There is not much movement in shop or selects. The demand for pattern stock is good. Manufacturers' stocks are small and considerably broken. Box factories are taking all the white pine available that is suitable for their work. Prices throughout the white list are firm. The hemlock market is active, sales still being in excess of production, and prices steady. The government is buying a lot of hemlock from the North, and will probably continue to do so for some weeks yet. Eastern box makers are also using large quantities of hemlock, and factory buildings are another good source of demand. Prices continue firm.

The government demand for hardwoods continues strong, and is making up for the reduced demand for interior trim, millwork, and flooring, as well as the quiet retail trade. Oak is fairly active, but prices seem to have been shaded slightly of late. The sales of gum are increasing slightly. It is expected that the standardizing of the government's requirements for hardwoods for boxes will result in a good demand for suitable lines.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

St. John Markets—Prices Firm

St. John, N.B., Oct. 8.—(Special to the Canada Lumberman.)—Conditions at St. John show little change in so far as prices are concerned. They still remain very firm and, if anything, are even better than two weeks ago. If one goes out to purchase stocks, neither spruce 1, 2 or 3 inch can be found in any quantities, and anyone having them is asking for 2 x 3, 4, 5 and 6 inches at least $28 to $30; 2 x 8 and up, $30 to $32. Spruce boards are impossible to find at less than $25, with very few at this price. Culls are as bad as merchantable, being almost impossible to find, and $15 to $17 is being asked and received. While these prices seem high, one turns to the other side of the question and finds, first of all, very little labor for the woods, and that at twice last year's prices, with provisions at least 25 per cent. higher, and everyone is hesitating whether to go in the woods at all. Jobbers do not want to go to the woods under contract, even though they are offered logging prices and conditions never before heard of. Therefore, the buyer must not judge the manufacturer by the prices. It is to-day taking 25 per cent. more men to do the same work as done a year ago, and the manufacturer does not know where or how he will get his raw material for next year or what its cost will be. His only hope of getting a profit is based on the stock he now offers for sale.

Laths and shingles remain unchanged.

Local business is still fair, but not so good as two weeks ago.

Labor conditions are not improving, and, with the winter season fast approaching, it is bound to be scarcer.

All logs on booms at Fredericton are not yet rafted, being held up by extreme low water in the river. Unless a raise comes soon some logs must be wintered there, which is a very dangerous proceeding. Should water come soon, a clean-up can be made, as not over seven million feet now remain to be rafted.

Ottawa Firms Not Receiving New Shell Box Orders

Ottawa, Oct. 12.—(Special to the Canada Lumberman.)—There has not been any great change in the Ottawa lumber market since the last report. The shell box situation commanded the principal attention of the manufacturers during the past two weeks. Ottawa lumber plants which formerly manufactured shell boxes state that the Imperial Munitions Board has recently allotted new contracts at very low prices. The trade at Ottawa believes that the majority of the new contracts went to Montreal and Northern Ontario plants. The new contracts are for two grades of boxes—the 6 in. and 4.5 in.

None of the Ottawa plants, so far as the Canada Lumberman could learn, had yet received new contracts from the Imperial Munitions Board. The Canada Lumberman has been reliably informed that the manufacture of shell boxes will not entirely cease, but will be cut down, and that possibly contracts for only two of the four grades of boxes formerly made will be let in future. Ottawa woodworking plants failing to secure new contracts have almost entirely ceased the manufacture of shell boxes. The W. C. Edwards Company, during the past two weeks, has been completing an old contract for shell boxes. The estate of James Davidson and the McAuliffe-Davis Lumber Company have entirely ceased manufacturing shell boxes.

Notwithstanding the shell box situation, the market has a noticeable tendency toward firmness. Manufacturers' prices showed no change since the last report. The spruce market is reported as being firm, with the prospect of remaining so, with shell box manufacturing in Canada being continued.

With some of the lumber plants business is beginning to pick up, as compared with the closing period of September. A small amount of new business is beginning to filter through. Shipments during October two weeks have not been heavy, though showing an advance over the period of September 15 to 30. Old business is keeping up fairly well on the whole.

The quantity of lumber in the mill yards is probably larger than at the corresponding period of last year. The mills have sold practically all this stock, but it has not been moved, first owing to lack of transportation facilities and, secondly, because it is not yet dry enough. Building operations are continuing on only a small scale, hence the demand for lumber in this regard is small.

Moderate Activity at Montreal—Ship Timbers Scarce

Montreal, Oct. 8.—(Special to the Canada Lumberman.)—The one prominent feature of the market is the pronounced demand for timber for shipbuilding. Enquiries of this description are being freely received, the demand being in excess of the supply. Advices from British Columbia state that the mills are swamped with orders, and that price has very little bearing on the situation. As a matter of fact, quotations have recently had a still further advance, and even these are dependent upon acceptance by telegraph. The shipbuilders are exceedingly busy, both on home and government account, some boats being for purely cargo purposes and others for war purposes.

There is a slight improvement in shell box lumber, due to a few more orders having been placed. This source of buying recently indicated signs of lagging. It is also reported that the British Government are in the market for further supplies of shooks.

The hardwood section is slow, furniture and piano factories being rather quiet. The requirements for building are of trivial amount.

Locally little is doing. The building season has not been satisfactory, the permits showing declines for the last few months. Notwithstanding a shortage in houses and flats, there has been no decided inclination to meet the demand, this being due to the high cost of labor and materials. During September the permits totalled $250,958, an increase of $45,502. For the nine months the value was $3,852,665, a decrease of $65,655.

Wholesalers report a fairly good business with the United States, although it is held up in one or two directions by railway embargoes.

The labor situation in the province is far from satisfactory. Advices received from lumber centres refer to the difficulty of obtaining adequate supplies of men and, what is of equal importance, competent help. The men are not only demanding high wages, but are adopting an independent attitude. Naturally, lumber firms are desirous of getting all the labor possible, and, under the stress of competition, have to hire men who are not up to standard, thus increasing the cost of getting out the logs.

After a spurt, exports to the United Kingdom have fallen away, and it looks as if the season is practicaly at an end. A little lumber has gone to South Africa, but it is stated that the British Government recently decided not to issue any further permits for the latter country. One of the exporters has sent a fair quantity of lumber to the Old Country via New York.

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Labor Renewals Always Expensive

Larger Employers Learning Importance of Greater Effort to Improve Efficiency by Reducing Dismissals

By J. W. MacMillan*

It is only within the last few years that the discovery has been made that the renewal of the labor supply in industries is an expensive thing.

Students of social conditions had seen plainly enough that the seasonal occupations were costly affairs for any community. The intervals of activity and idleness of the casual laborer were regarded as one of the prime problems of society. But the cost was assessed altogether upon either the laborer himself or society at large. It was not recognized that the employer of the intermittent labor was a loser as well. Much less was it recognized that the constant inflow and outlet of employees in all occupations was a great and largely needless drain upon the financial resources of a factory or shop. Many a denunciation of the employer's heedlessness of human welfare was based upon the belief that the care and replacing of machinery cost something, while the care and replacing of men cost nothing. It was supposed that the worker might be sucked dry, worn out, smashed to bits, kicked out, thrown on the scrap heap, without any interference with profits.

The employer also took the same view. When there was a crowd of unemployed at his gate he held that the labor conditions were favorable. Could he not, then, at once fire any man and immediately hire another in his place? The machine was geared to a certain speed. and the activity and capacity of the man who tended it was accordingly guaranteed. One large employer of labor in Philadelphia was quoted as saying: "We are not interested in problems of personnel. We have a lot of work, but there are always more people to do it than there is work; and if those we have do not wish to work under our conditions, they can go, and we will go out and get others."

The Discovery

The discovery appears to date from a study of employment problems made by Magnus W. Alexander, of the General Electric Company of the United States of America, made in 1913. In that year one motor manufacturing company hired 54,000 men to keep 13,000 jobs filled. In twelve factories making machine and metal products, in that same year, whose labor force increased during the year from 37,274 to 43,971, there were hired 42,571 men. That is a labor turnover of 100 per cent. After a careful study of the different elements of cost in this process of replacing of labor, Mr. Alexander came to the conclusion that the average cost of hiring and firing a man was between $35 and $40.

A similar scrutiny of the same process was made during the following year by W. A. Grieves, of the Jeffery Manufacturing Company, of Columbus, Ohio. He found that twenty representative factories whom he interrogated took on 69,000 new men during that year to keep a labor force of 44,000 intact. His estimate of the average cost of hiring and firing a man was almost the same as that of Mr. Alexander. He made it $40.

Other executives of big businesses have expressed the opinion that these figures are rather under than over the average for the entire United States. Some do not hesitate to put the average cost of hiring and firing a man at as high a figure as $100. And they say that the average labor turnover for the whole country is not less than 200 per cent.

Pursuing the subject a little farther, Mr. Alexander came to the conclusion that more than half of the new 42,571 employees hired by the twelve factories he investigated had been needlessly hired, at an expense to the factories of $831,000. Mr. Grieves, for the twenty factories of his survey, placed the unnecessary cost at $1,760,000.

Employment Managers

These and similar disclosures made a great impression on the more intelligent manufacturers of the United States. Doubtless the recent scarcity of labor has heightened that impression. One consequence was a gathering in Philadelphia several weeks ago of several hundred "employment managers." This is the new official which the revelations of Messrs. Alexander and Grieves had called into being.

Formerly the duty of hiring and firing men had been left to the foreman of departments. It was at once seen that foremen are not the right officials for this duty, for foremen are a class of superior work whose capacity lies in their technical knowledge and their ability to maintain the output. They are not experts in employment matters. Moreover, their legitimate duties in their department are seriously interfered with by their time being taken up in engaging and dismissing the men under them. One executive who had adopted the new plan said recently:

"One of the first benefits we derived was in freeing the foremen from the daily necessity of looking over men they needed at the factory door. Under the old system the first hour of each morning and the most critical hour from a departmental standpoint was signalized by the absence of the foremen from their departments. The new system automatically changed this, and foremen were free to supervise work in their own departments, rather than lose hours daily in interviewing applicants for work."

Thus each big industry is getting to have its own employment bureau, an expert and efficient department in charge of this one important function, and resulting in the saving of many dollars in the course of the year. So far as these new bureaus have succeeded in organizing their work they have laid down three lines upon which they work, each of which means something for human welfare as well as for profits.

1. First, the securing of labor from recognized labor markets, rather than from the waiting crowd at the gate. This is a business-like and rational method which stands in sharp contract with the old, unregulated, hit-or-miss fashion of former times. It is bound to produce employment agencies of a better class than have been common, and may lead to a better relation between capital and labor through a new use being found for the trades unions.

The Round Peg in the Square Hole

2. Then comes the fitting of men and fitting them to their jobs. When the foremen did the hiring and firing the laborer was tried in only one department. If he proved a round peg in a square hole there, out he went. Under the new system he is apt to get a second chance in another department, where he may make good. Under the new system the foreman has no power to discharge. He refers the unsatisfactory workman back to the employment bureau with a statement of his reasons for considering him unsuited to his department. The employment manager then studies his case, with a view to saving the forty dollars or more which the firm stand to lose by the man's discharge, tries him out in some other place, and only fires him when it has become plain that he is hopeless.

3. The most important of all the functions of the employment bureau is the third, which consists in fitting the jobs of the men. The factory is as human as its staff, and is as likely to require consideration and mending. Thus has arisen what has been called "the new profession of handling men." For it has been discovered that the high labor turnover is not exclusively due to the discharge of the incompetent man. It is also due to voluntary leaving of competent ones. Thus it has come to be recognized as good business not to allow any man to leave without an enquiry into his reasons for leaving. A common device is to make a rule that the signature of the employment manager must be secured before he draws his last pay. This provides for a face-to-face interview between the employment manager and the man who is leaving. One of the members of the recent conference in Philadelphia stated his experience thus:

"When the men quit or are discharged they have no reason for withholding information. Complaints are heard of nagging foremen, lost time in waiting for work, and other complaints bearing on shop efficiency. These are investigated, and if the fault is with us it is remedied.

The Weakness of the Foreman

"These complaints bring to light the weaknesses of foremen. One of our best foremen had always a 'chip on his shoulder,' and approached his men with that attitude. He caused a great deal of friction before the fault was discovered. A talk with our superintendent convinced him that, while that attitude may have been all right ten years ago, it can't be done—not now.

"Another case: A man quit, and, on being asked for reasons, stated that he had to lose too much time waiting for one indispensable tool and for material for his work. Likewise he was advised that his work was O.K. by one inspector, only to finish it up and have half a day's work thrown back by another inspector. An investigation proved that the man was justified; the case was settled, and the man is still with us. As this man was an experienced hand it would have cost us $100 to break in a new man. It looks as though this was a fair day's work."

While the immediate and compelling motive in this movement is the desire for a lower cost of production and consequent increased profits, it is quite plain that these employment managers and the exetives who have employed them are well pleased that it means also better treatment for the working force. Every discovery that the interests of capital and labor are identical means so much more harmony, so much more promise that the great economic battle of the present day may reach a peaceful settlement.

During the past fifty years forest fires in British Columbia have destroyed an amount of timber approximately twice as great as that now standing in the province, or approximately equivalent to the total stand of saw timber in the entire Dominion.

*Reproduced from the Journal of Commerce.

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Mutual Interests of Mill and Retailer

Conditions That Have Kept Them Apart in the Past—Unity of Purpose Necessary in Promoting Development of Trade Ideals

Edward Hines, of Chicago, one of the most successful lumbermen in the United States, and one of its most eloquent speakers, excelled himself in an address which he delivered recently at the first annual meeting of the National Retail Lumber Dealers' Association, Chicago. He devoted his attention to the lack of unity between mills and retailers, and how to overcome it. The subject is one that lies peculiarly close to his heart, as well as to his business interests, and he dealt with it in a thoroughly convincing manner. After his preliminary remarks, Mr. Hines said:

The absence of complete unity and harmony between the manufacturer of lumber and the retail lumber dealer may be attributed to obviously apparent reasons, none of which can withstand the light of logic. In all my experience I may truthfully say that, notwithstanding a lack of better understanding between these two branches of our industry, I have never perceived any motive displayed that was purposely designed to frustrate efforts to make progress or advance its interests. Ignorance, indifference, and sometimes selfishness have been factors that have frequently interrupted a more harmonious feeling, but I ascribe whatever of discord there may have been to a lack of understanding of the exigencies of each branch of the industry. That there has not been greater sympathy and forbearance always is due to an increasingly inherent need for closer attention to the details of business generally and a lack of vision and perspective.

The problems of the manufacturer have not always received enough consideration from the retail lumber dealers. I say this in all kindness and without rancor, for, as I have previously stated, much of the lack of a closer relationship has come about through tendencies to adhere too closely to the single idea of buying and selling without observation of the conditions that affect the industry in a big way, and oblivious of the opportunity for comprehending a larger scope of its great operations. The relationship that exists to-day is not unfriendly, but it is not one of sympathetic interestedness. Too much reliance is placed upon individualism and rejecting too readily the dominant factors that have contributed so largely toward the success for marketing of numerous articles of commerce that have everywhere and in every way surpassed us in constructive effort. Let us take for example the manufacture and marketing of steel and kindred products. Differing only in the method of distribution, the principles concerned are not dissimilar, especially as they pertain to the manufacture of the various articles. From the moment the raw material is converted to the sizes and dimensions of the finished product required for the numerous purposes for which these useful products are made there is a spirit of co-operation between manufacturer and distributor that stimulates good feeling and welds the interests of each into one harmonious unity. Sordid tendencies and inclinations are largely absorbed and overcome by a broader and more liberal consideration of the fundamental needs of each branch of the undertaking. Manifestations of a keener regard for the welfare of each is apparent, and quality is more a factor in the sales argument than the price. True, the manufacturer of steel and allied interests are of lesser numbers and therefore more easily and better organized than are the manufacturers of lumber. The latter have been confronted for years, and still must contend with a diversity of conditions not approached, I believe, by any other industry. These various elements are less susceptible to natural restraint or control than are those controlling other products, but they are not impossible of better arrangement.

The Remedy Must Be Found

Proceeding upon the hypothesis that there exists a need for a better understanding between the manufacturer of lumber and the retail lumber dealer, to the end that their mutual interests may be more satisfactorily and more profitably served, the remedy must be found if we pursue the subject to its logical conclusion. We have all rested upon a too smug confidence in the superiority of our product as a utility in the world's commerce, with the result that the insidious growth of demand for substitues has been overlooked and unobserved, until its development has assumed such alarming proportions that we have been rudely awakened from our lethargy. The abstract goodness or utility of a thing does not measure its worth. Goodness or utility is multiplied as it is conveyed. An insignificant utensil used by many is a greater good than a superb article that is never brought into general use. Our product may be infinitely superior in every respect to some of the substitutes that have supplanted it, but failure to perceive the advantages of safeguarding our interests, a result of too indifferent and loose selling methods has narrowed the circle of distribution, and accordingly restricted the use of lumber many times, to the disadvantage of the consumer. From my viewpoint the manufacturer and the retail dealer are equally culpable in their lack of initiative and aptitude for acquiring knowledge that is essential to a better selling effort. It is the sales end of our business that has languished and needs greater intensive effort. In this day of advanced ideas who shall say that the educational methods employed by manufacturers of and dealers in other commodities have far surpassed and outranked our own obsolete ways of marketing our product. It is in this department that I have found the greatest need for action, and in which I place my greatest reliance for the unfication and co-ordination of our interests.

The world to-day recognizes salesmanship as an art and a profession. The biggest prizes with which success can lure men go to the seller. Upon him depend thousands and thousands of faithful, conscientious workers who lack initiative, and the populace at large which needs to be lifted out of indifference and an adherence to the old and worn to new methods, applications, and objects. The discoveries of the centuries, upon which we look with pride, are not only the work of the inventive mind, fired with the flame of genius, but are the reflex results of the world's demands. Sellers as much as inventors stand behind them. It is not merely the porsonality of the seller which makes things happen, but the selling quality in him that surges beyond him, and we read him in the street cars, we see him coaxing from the shop windows, he beckons us from fence and billboard, in the newspaper and daily mail, and we see the night sky electrically flooded with him.

The standard of excellence in selling is high. All positions in the world which are recognized and honored have had to make their ascent against public antagonism. In exact ratio to the stubbornness of the fight the apparent insurmountableness of the opposition is the glory of the place achieved and the world's homage to the conqueror.

Power in its many forms dormant in men awakens under attrition, and opposition on the one hand and the urge of enthusiasm and inspiration on the other. Nothing great comes from opposition alone, nor from enthusiasm only. Achievement has paid its price in the overcoming of obstacles; in unwavering aligning accomplishment with inspiration. The daring of the human mind is the generative principle of progress. The achiever overcomes inertia and compels opposition to serve his desire.

Measuring difficulties is one of the most difficult tasks mankind is compelled to perform. Scientists told Napoleon it would be impossible to cross the Alps. They proved it theoretically. "There shall be no Alps," was the unqualified answer which will live as an inspiration for all time. And the spirit that answered thus was the spirit that crossed the Alps. When Grant first proposed the siege of Vicksburgh, Sherman, who was theoretically one the greatest tactitians in the war of the rebellion, counselled against it, and demonstrated to Grant on paper the utter futility of such a movement. Events proved that Grant was right. He had measured the difficulties, and, contrary to every known strategy of war, he surmounted them and Vicksburgh fell.

In measuring the difficulties that have heretofore prevented a better understanding of the objects the lumber industry must attain I feel sanguine that whatever of misunderstanding there has been apparent has been due to the obscurity of the points at issue rather than to any hostility on the part of the retail lumber dealer. I have said, too, that I was convinced that whatever of indifference or opposition there may have been shown in the past was not from design or motive. It is due almost entirely to a lack of understanding of the essential needs of each and how best to proceed to repair them. The retail lumber yard should represent in its best aspects the connecting link between the manufacturer and the consumer of lumber. It should serve with profit to itself, and with satisfaction to the manufacturer, as the distributing agency for forest products with relation to the kinds and character of lumber that may be available, in reasonable proportion to the production. Lumber that is always in short supply with the manufacturer should be intelligently conserved, and that which is usually in average or surplus supply should be sold according to present-day standards of selling. Prospective buyers should be made acquainted with the good points of the particular kind of lumber offered. Many times these particular surplus items may be substituted for stock that comes slowly from a sawlog, and accordingly at greater cost of production and with equally less facility. The consumer is not usually conversant with the practices and customs of the lumber business. He must, therefore, be educated to know kinds and qualities. His interest must be aroused and his suspicions converted to confidence and a feeling of security. The virtues of wood generally should be practically demonstrated. The relative merits of certain kinds of lumber for

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specific purposes should be honestly and conscientiously presented. Where it is obviously impractical to use wood for a given requirement by no means should the use of wood be urged. On the contrary, whatever material is avowedly better for the purpose should be offered and sold.

Closer Business Relationship Required

The splendid possibilities for negotiating and maintaining a closer relationship between the manufacturer and retail lumber dealer cannot be too seriously considered. In the modern intercourse of business the remoteness of the manufacturer of lumber from the ultimate consumer renders the position of the retail dealer well nigh indispensable as a means of distributing lumber. The retail dealer should occupy very much the same position in the trade as the drug store that ministers to the wants of the populace, selling its service along with its merchandise. It should conduct a vigorous and an intelligent advertising and publicity campaign, with a view to attracting the attention of prospective buyers of wood products. Some big, dominant idea should be selected, round which to build such a campaign of publicity as will attract attention and secure the public interest. There are so many excellent features about wood, its growth and development that there is no paucity of good, substantial ideas and the material from which to evolve them. Quality and service, always big, upstanding factors in the growth and development of business, should occupy a conspicuous place in every plan that contemplates constructive effort to renew and energize business. I take much pride in calling attention to the unusual progress that has been made in the recently organized campaign of publicity for birch by the Northern Hemlock and Hardwood Manufacturers' Association of Wisconsin and Northern Michigan. It is surprising how much real, practical interest has already been manifested by architects and consumers, plainly evidencing the fact that all too little real knowledge of this beautiful wood has previously been disseminated. At a recent meeting of our association one of the leading architects of Chicago was asked to address the association on the subject of wood from the standpoint of the architect. His remarks introduced a subject that significantly demonstrated the need for just such a campaign of publicity as was afterward decided upon for our beautiful birch. The instance is so peculiarly apropos of this contention for greater publicity and better selling effort that I shall repeat it for your benefit. The architect referred to had just completed the erection of a residence for his own occupancy, and, preceding the work of construction, he had made a very careful investigation of the various woods from which to make a selection for his home.

The personal interest in acquiring n exact knowledge of woods, arising from the fact that the material was to be used for his own purposes, prompted this architect to pursue an intensive study of woods, justsuch an effort as every salesman should pursue to secure orders. Previously without any personal knowledge of birch, this prospect approached with an ordinary selling plea for any wood, could not have been indused to use it except that he was positively convinced of its superiority. His acquisitiveness, touched with a personal selfish interest in having just what he wanted, supplied the necessary elements so lacking in the usual selling methods, with the result that he convinced himself birch was the superior wood for every room but two in his home.

Your splendid association, conceived under auspices which, I venture to say, shall inspire confidence not only in your own membership but in the manufacturers of lumber as well, occupies a most excellent position for dispelling whatever misgivings may previously have taken possession of the manufacturers, in their conclusions pertaining to the possibilities of securing that measure of co-operation they have sought for many years. You will be the medium through which information may be systematicaly and efficiently distributed, and the community of interests so essential to a better understanding between the two great branches of our industry shall be rendered easier of solution and more readily harmonized. When a closer relationship has been estabilshed and a more intimate knowledge of the problems of each has been acquired there will follow a responsive feeling that will be gratifying and encouraging. It needs only the touch of confidence to awaken a latent feeling of kinship between the one who produces the lumber and the one who distributes it; and, once this feeling becomes solidified, new thought and new ideas will illumine the way to a lasting and enduring allegiance to principles that will more easily harmonize the mutual interests of the manufacturer and retail dealer, and thus sustain a great industry.

Canadian Hardwoods Highly Valued in Cuba

The Canadian trade commissioner at Havana, Cuba, in a recent report, says:

Comparatively few persons in Canada realize what a valuable asset we have in our hardwood forests of Eastern Canada. The quantities of hardwood burned every year in the process of clearing up the land in Canada is enormous, and immense quantities of some of our most valuable wood, such as bird's eye maple and curly birch, are being used year after year for firewood for our houses. Cabinet makers here say that they would be glad to buy our ash, birch, and maple for the manufacture of furniture, and say also that these woods, when made up and polished, make as rich looking furniture as do the Southern woods.

The price of mahogany and Cuban cedar is steadily advancing, and to-day mahogany is being sold by wholesale dealers at from $110 to $130 per thousand, and cedar from $120 to $140 per thousand. Some of our hardwoods, such as curly birch and bird's eye maple, would bring as high a price in Cuba as mahogany or cedar, and when a person uses a log of bird's eye maple or curly birch for firewood he is probably using for fuel wood that is worth from $75 to $100 per thousand. In cutting timber for firewood, all hardwood logs perfectly sound, free from knots, seams, or other blemishes that are found to have a particularly good grain should be put to one side, to be sold for manufacturing purposes, and logs substituted for fuel that are seamy, hollow, knotty, or have other defects that would render them of no special value for manufacturing purposes.

Good, sound ash, birch, and maple lumber is in demand here for making furniture, and will sell at high prices.

This lumber should be shipped to this country in the round log, as sawn hardwood lumber is liable to warp and check when coming into a hot country, which would detract greatly from its value. This lumber could be shipped in car lots to Boston or New York and thence by steamer to Havana, or could be shipped direct to Havana by rail via Key West.

Lumber Price Comparisons

The Brookmire Economic Service, of New York, gives a price basis on hardwoods for the month of September of $55, as compared with the same price a month previous, $45.60 the year previous, $42.20 two years previous, and $41.60 three years previous. The yellow pine average price based on values of fourteen grades is said to have been $31.32, as against the same price for August and $21.04 a year ago, $17.30 two years ago, and $18.61 three years ago.

Canada's exports of forest products during the twelve months ending August, 1917, amounted in value to $53,241,745, as compared with $55,004,835 during the twelve months ending August, 1916, and $45,658,916 during the twelve months ending August, 1915.

"Brazel Patent" SNOW PLOWS

Known in every Camp from the Atlantic to the Pacific as the most satisfactory Snow Plow made.

Combination Model, Lumberman's Snow Plow, can be used either with or without Rut Cutter.

One man to operate. Adjusting wheels close together make change for light or heavy work in an instant. Wings placed to throw snow 9 ft. wider than sleigh track or narrower if desired. Height of mouldboards prevent snow falling back on track. BRAZEL PLOWS cut 6 in. wider than logging sleighs, roll snow outside track and away from roadway. Cut off knolls, fill up holes and leave a perfectly level road. Cut off dirt and manure heaps from an ice road, leaving a clean roadbed. Roll up and push entirely away from the road, 18 inches of loose snow each time the plow passes over.

THE BATEMAN-WILKINSON CO., LIMITED
390 Symington Ave., Toronto, Can.

Successors to the WILKINSON PLOW CO., LIMITED
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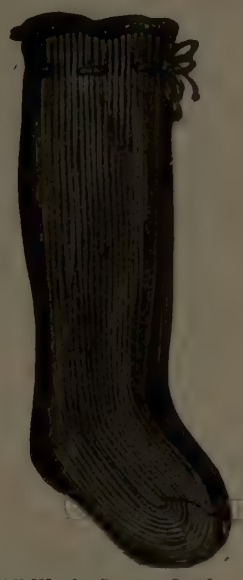
Lumbermen's and Railroaders' Clothing

Guaranteed Pure Wool Mackinaw Coats, Pants, Shirts, Mitts Socks, Underwear, Etc., of the Highest Grades.

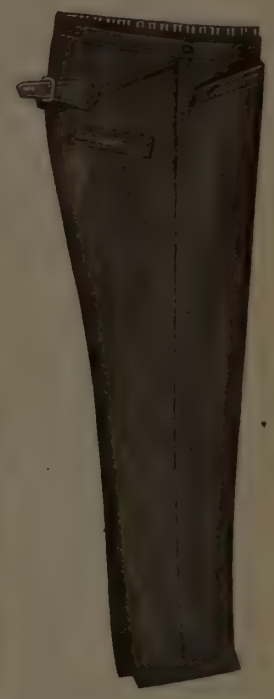
Plain and Fancy Pure Wool Mackinaw Coats, with high seven-inch collar, close fitting, with tab at throat. Sizes 36 to 46.

Smart-Woods Home-made, Hand-knit Wool Mitts, as cut. Generous sizes, perfectly proportioned. For use with large fitting pullovers.



All-Wool Long Stockings, as cut. Black or fancy striped or checked.

Our Special Muleskin, Calfskin and Horsehide Gloves have fully reinforced cuffs and are heat and wetproof. Ask for samples and prices.



Men's Heavy Pure Wool Mackinaw Pants, as cut. Black, Khaki, and Olive-Green shades. Generous sizes, well made.

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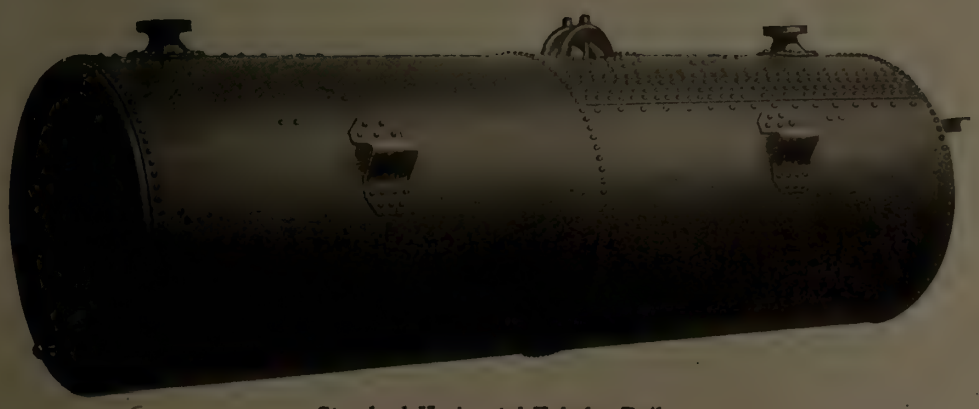

Standard Horizontal Tubular Boiler

¶ We have received recently several consignments of plates and tubes for standard boilers.

¶ While this material lasts we are enabled to make reasonably prompt shipment of boilers.

¶ Enquiries to our nearest sales office will receive personal attention.

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Excellent Planing Mill Facilities. Prompt Shipments.

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Wholesale Dealers in Rough and Dressed Lumber, Lath and Shingles
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EDGINGS

Ontario

D. L. Schaefer & Co., St. Thomas, Ont., recently lost their planing mill by fire. The loss is estimated at $7,000, and is partly covered by insurance. The owners will rebuild, and new machinery and general equipment will be required.

The Pine Lake Lumber Company, Ltd., of Pickerel, Ont., are now moving their mill, purchased from the Ontario Lumber Company on French River, up to Pickerel, Ont., where they are erecting a new mill, which will be ready for next seasons sawing.

The C. E. Fleming Tie and Lumber Company, Ltd., has been incorporated, with head office at Ottawa, Ont., and capital stock of $100,000, to carry on business as timber and lumber merchants, saw and planing mill proprietors, etc. Among those interested are F. X. Plaunt, C. E. Fleming, and P. J. Villeneuve.

The Arnprior Cabinet Company, Ltd., has been incorporated, with head office at Arnprior, Ont., and capital stock of $100,000, to carry on business as building contractors, woodworkers timber, and lumber manufacturers, and to manufacture and deal in articles of all kinds in the manufacture of which timber, lumber, and wood are used.

The Harris Tie and Timber Company, Ltd., has been incorporated, with head office at Ottawa, Ont., and capital stock of $100,000, to carry on business as timber and lumber merchants, saw and planing mill proprietors and to manufacture lumber and woodenware of all kinds. Among those interested are F. X. Plaunt, H. P. Plaunt, and P. V. Villeneuve.

The Soo Pole and Tie Company, Ltd., have been incorporated, with head office at Sault Ste. Marie, Ont., and capital stock of $500,000, to carry on business as loggers and to operate sawmills, planing mills, and to manufacture and deal in lumber, timber, and wood of all kinds. The provisional directors of the company are H. F. Partridge, E. D. Alger, and J. L. O'Flynn.

The Porcupine Pulp and Wood Company recently purchased extensive timberland areas in the Porcupine district. Arrangements are being made to cut timber this fall, a large portion of which will be exported to the United States. Among those interested in the company are A. C. Hastings, Holyoke, Mass.; P. Schoellkopf, A. A. Oatman, F. Chormann, E. E. Mansfield, G. F. Nye, and H. W. Isaacs.

Good progress is being made in connection with the plant of the Port Arthur Pulp and Paper Company, Port Arthur, Ont. A. G. Pounsford, general manager of the company, states that the first digester is expected to be in operation during November. The construction on the mill commenced on April 13 last. All the buildings have been roofed in. The plant will have a capacity of 60 tons a day, half bleached and half unbleached, and will supply the mills of the Provincial Paper Company at Mille Roches, Georgetown, and Thorold, which are behind the Port Arthur enterprise. It will also have some tonnage for sale.

Tenders are being called by Hon. G. H. Ferguson, Minister of Lands, Forests, and Mines for the Province of Ontario, until December 17, for the right to cut pulpwood and pine timber on a certain area situated in the vicinity of Kapuskasing River, in the districts of Temiskaming and Algoma. Tenderers are to offer an average rate per cord for all classes of pulpwood, whether spruce or other woods. The successful tenderer will be required to pay for the red and white pine on the limit a flat rate of $10 per thousand feet board measure. He will also be required to erect a mill or mills on or near the territory, and to manufacture the wood into pulp and paper in the Province of Ontario. Tenderers will be required to deposit a marked cheque, payable to the treasurer of the province, for $25,000, which will be forfeited in the event of their not entering into an agreement to carry out conditions, etc. The deposit will be held until the terms and conditions of the agreement have been complied with, and may then be applied by the Minister in payment of accounts for dues or other obligations due to the Crown. Full particulars may be obtained from the Minister.

Eastern Canada

The Mercantile Lumber and Supplies Company, Ltd., Montreal, P.Q., has been registered.

The Canada Steamship Lines, Ltd., 9 Victoria Square, Montreal, P.Q., are contemplating building a shipyard at Cap de la Madeline, P.Q.

Fraser Brace & Co., 83 Craig St., Montreal, P.Q., are in the market for a large quantity of British Columbia fir and general lumber used in shipbuilding. The engineer is G. G. Underhill. The company will do their own buying.

Provincial Industries, Ltd., Doreil, P.Q., are operating the limits of the former St. Simeon Lumber Company, Ltd., which has gone out of existence. The company are cutting pulpwood only, and will take out from 30,000 to 40,000 cords during the present season.

In the report of the Quebec Streams Commission, just issued, it is stated that the Brompton Pulp and Paper Company has been awarded the sum of

$144,465, payable in 4½ per cent. Quebec Government bonds, for certain rights and interests in dams on Lakes St. Francis and Aylmer, reserving, however, the use of the waters stored for the purpose of driving its logs, free of charge. The award was by arbitration.

Western Canada

F. L. Buckley, of Vancouver, formerly manager of the British Canadian Lumber Company, has purchased the mill at the mouth of Kyak River, and will cut principally spruce.

McCarter Shingle Company, Victoria, is the new name of Victoria Shingle Mills, Ltd. P. E. McCarter and W. K. McCarter are interested in the company. The capacity of the mill is about 80,000 shingles per day.

The Graham Island Spruce and Cedar Company, Ltd., has been incorporated, with head office at Prince Rupert, B.C., and capital stock of $40,000, to carry on business as timber manufacturers, shipbuilders, etc.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 28th day of November, 1917, for the purchase of License X461, to cut 6,290,000 feet of Douglas fir, hemlock, cedar, and spruce on an area situated on Agamemnon Channel, N.W.D.

The Pearson Shingle Company, Ltd., has been incorporated, with head office at Vancouver, B.C., and capital stock of $10,000, to carry on business as shingle and lumber manufacturers, timber merchants, loggers, sawmill proprietors, and to deal in timber and wood of all kinds.

The North Canada Lumber Company, Ltd., has been incorporated, with head office at Vancouver, B.C., and capital stock of $10,000, to carry on business as timber and lumber merchants, sawmill proprietors, manufacturers, and dealers in sawlogs, timber, piles, poles, laths, sash and doors, etc.

Thurston-Flavelle, Ltd., have been incorporated, with head office at Port Moody, B.C., and capital stock of $250,000, to carry on business as loggers, lumbermen, sawmill men, and timber manufacturers. Among those interested are R. J. Thurston and A. Flavelle, of Port Moody, B.C., and J. D. Flavelle, of Lindsay, Ont.

A company has been incorporated in British Columbia known as the National Patents, Ltd., for the development and manufacture of smokeless fuel from wood waste. The experimental plant has been constructed at Nanaimo, B.C., where fuel is being manufactured in small quantities. Walter Thomas, Nanaimo, B.C., is manager of the plant.

Quebec Cullers' Report

The following comparative statement of timber, measured and culled to date, is furnished, under date of October 6, by the Quebec Supervisor of Cullers' office:

	1915. Cubic feet.	1916. Cubic feet.	1917. Cubic feet.
Waney white pine	399,280	142,160	87,160
Oak	110,120	321,160	103,360
Elm	46,840	69,440	110,240
Ash	840	1,680	320
Butternut	.....	40	.....
Birch and maple	48,880	46,880	15,880
Pitch pine	.....	.....	41,230
Fir	.....	.....	36,490

The Forest Mills of British Columbia, Limited, will log 15,000,000 feet for Cascade and 10,000,000 feet for Nelson this year.

J. O. Cameron, president of the Cameron Lumber Company, Victoria, has been elected vice-president of the Association of Pacific Coast Port Authorities.

The fourth quarterly meeting of the Eastern Lumbermen's Association was held at Bangor, Maine, on October 11. The business meeting took place in the afternoon, and a dinner was held in the evening.

Japanese paper manufacturers are getting ready to take a large quantity of sulphite pulp from British Columbia, and reports received by the government are that a large plant is being erected at Tokio for the manufacture of paper products, the cost to be $2,500,000. The construcion is by arrangement with the Japanese Government.

The entire output of airplane spruce of every mill on Grays Harbor, Wash., has been commandeered by the United States Government for use in building air fleets for the Allies. The United States Secretary of War has wired to the mill men in this district to speed up spruce production and deliveries. His request is being complied with fully.

One of the Pacific Coast pipe companies reports a large sale of material for a 12 ft. diameter penstock for a power development project in New York State. The total length of the line is 10,440 feet, the creosoted portion is 3,500 feet, and the untreated portion 6,940 feet in length. The entire amount of stave material involved in the order is 1,800,000 board feet. Creosoted stave pipe was substituted for reinforced concrete, included in the original plan.

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Solicit your kind enquiries for
Spruce, Pine and Birch
in all grades and thicknesses
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Dressed and Rough
White and Red Pine, Spruce, Hemlock, Banksian Pine, Birch, Maple, Dimension Cedar, B. C. Fir, Yellow Pine, Railway Ties, Fence Posts, etc.
Prompt shipment. Satisfactory stock. Good service Write for Prices.
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"By-Pass" Blower Systems
for green saw dust and wet stringy material
Material that usually clogs the ordinary Blower is handled easily and continuously by our "By-Pass" Blowers. No material passes through or around the fan. That is the big secret of "By-Pass" success. Slow speed and minimum power are other strong features. Write for literature and all details.
We manufacture and install complete systems
Toronto Blower Company
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Milling in Transit Exclusively

We make a specialty of milling in transit—we do nothing else.

Prices on any size order gladly furnished.

We do moulding, trimming, planing, sticking, matching, etc.

Prompt service and good work guaranteed on all orders.

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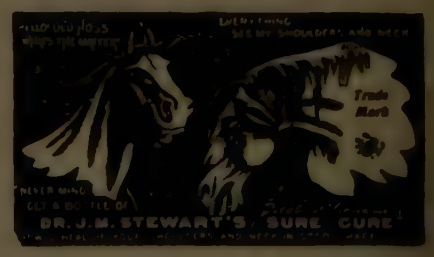
Your New Saw Mill

Will give you the best service and the longest service with the least expense for upkeep—If it is a Fisher & Davis Mill.

Catalog of Saw Mills, Edgers, Planers, etc., is yours for the asking. Ask to-day!

FISHER & DAVIS MFG. CO. St. Louis, Mo.

Insure your horses against sickness



Why not? You protect your mills against fire by installing fire-fighting apparatus; you protect your employees against accident by the use of machinery guards—then why not protect the health and efficiency of your horses? And how? By keeping in your stables a good supply of Dr. Stewart's Veterinary Remedies.

It may be the means of saving the life of many good horses, and will keep them sound and vigorous at all times.

A LIST OF DR. STEWART'S VETERINARY REMEDIES

Stewart's Sure Cure (antiseptic gall cure) the original, in liquid form, 16 oz. bottles	$9.00	doz.
Stewart's Excelsior Liniment, 32 oz. bottles	9.00	"
Stewart's Lightning Colic Cure, the only colic cure that removes the cause, 16 oz. bottles	8.00	"
Stewart's Pure Condition Powders, 2 lb. air tight tin can	5.00	"
Stewart's Hoof Ointment, 1 lb. can	5.00	"
Stewart's Heave Relief, large can	5.00	"
Stewart's Cough and Distemper Cure, 50 doses to bottle	7.00	"
Stewart's Proud Flesh Powders	2.50	"

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Lath Machine

From our many years of experience we evolved this "Dunbar" Original Lath Machine. Every improvement that could be suggested, every time-tested idea for the betterment of product and for greater speed, has been incorporated in this machine. We believe it has no equal, and there are a great number of mill men throughout Canada who share this belief with us. Carefully constructed of high grade materials and designed to work steadily under the hardest conditions.

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Conditions in Canada necessitate an engine that will stand any amount of strain and hard work in the lumber industry. With this idea in mind we have brought out the "Dunbar" engines perhaps a little stronger than is really needed. They do their work easily and willingly, and stand a great amount of hard usage. Built entirely in Canada for the Canadian lumber trade.

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You will need no excuse for the quality of your product if you use the original "Dunbar" Clapboard Machine. Expert in every detail. This machine will give you the very best service under most trying conditions. It will turn out work without delays. It will need practically no repairs and will increase your output. We cannot recommend it too highly because it is giving this very service to lumbermen in all parts of this country.

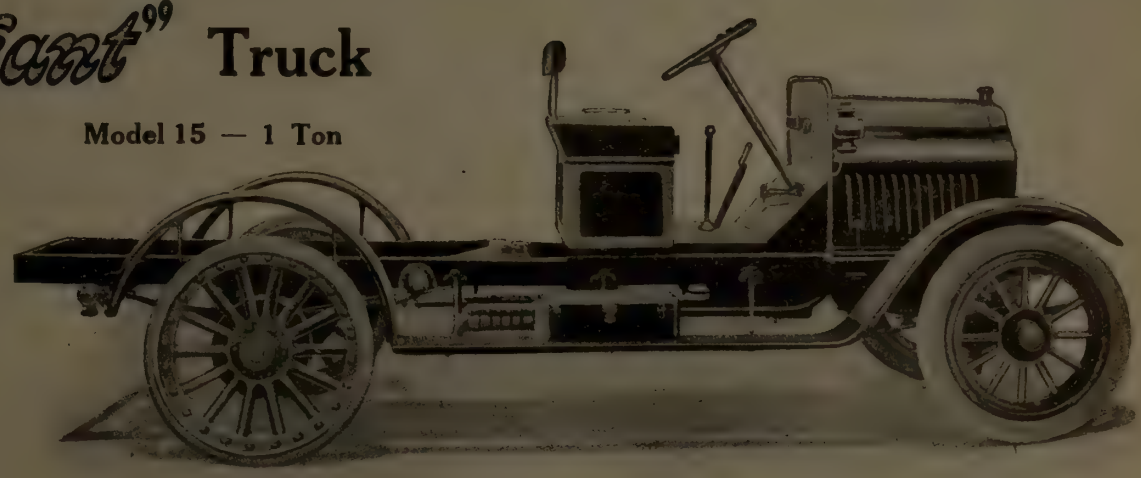
Send for catalogues of any or all of these machines.

Dunbar Engine & Foundry Co.

WOODSTOCK, N.B.

The "Little Giant" Truck

Model 15 — 1 Ton



The Little Giant is without doubt the most logical motor truck for your business.

Highly standardized—perfectly equipped — built to withstand maximum wear and tear — this car stands for real delivery efficiency.

Note in particular the exclusive feature which will save you 50 per cent. in fuel.

Special Features

Timken Worm Drive
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"H 4"—1½ tons Chain Drive
"15" — 1 ton Worm Drive
"16" — 2 tons Worm Drive
"17" — 3½ tons Worm Drive
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Hard to Get Men ?

Then Use MACHINERY

Our Hoisting and Haulage Engines will help you out in your labor problem, and at the same time ***save you much money*** by handling your logs and other timber more quickly and at a lower cost.

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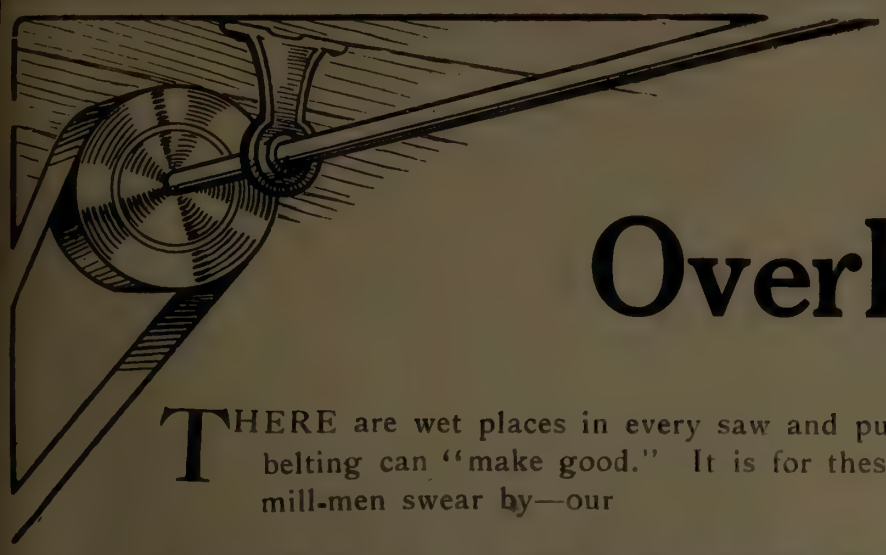


When You Overhaul Your Mill

THERE are wet places in every saw and pulp mill where nothing but the highest class belting can "make good." It is for these wet places that we recommend what most mill-men swear by—our

"ACME WATERPROOF" BELT

this belt is especially made for a rough and trying service. It has less stretch than any other belt by 15 to 25 per cent.

When you are overhauling try a Goodhue "Acme Waterproof" belt. Other Goodhue belts are "Extra" and "Standard."

Prices and Particulars on Request.

J. L. Goodhue & Company, Limited

DANVILLE - QUEBEC

WINNIPEG AGENTS—Bissett & Webb, Ltd., 151 Notre Dame Ave., East, Winnipeg, Man.
VANCOUVER AGENTS—Fleck Bros., Ltd., 1142 Homer St., Vancouver, B. C.

YOU NEED "LITTLE DAVID" FOR WOODEN SHIPBUILDING

— MORE WORK AND LESS WORRY —

The "Little David" Wood Borer is the "Shipbuilders' Wood Boring Machine," because it is light, powerful and speedy, and above all, simple and durable.

It is made in three sizes, the smallest boring holes in wood 1" diameter and under, and the largest, 4" diameter and under.

All sizes are reversible, and the cases are of aluminum with steel bushed cylinders. This explains why the largest size is about ten pounds lighter than any other wood borer of equal capacity.

We have other labor-savers for wooden ship work, such as the CC-101 Drift Bolt Driver, Pneumatic Hammers adapted for trenail driving, and Pneumatic Tools for horsing oakum, etc.

Our nearest branch will be glad to give you full information, and to send bulletins, etc., at any time.

CANADIAN INGERSOLL-RAND CO., Limited

COMMERCIAL UNION BUILDING, MONTREAL. CANADA

Works : SHERBROOKE, Que.

Branches: Sydney . Toronto Cobalt Timmins Winnipeg Nelson Vancouver

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:

1 inch No. 1 cuts and better.	$50 00	52 00
1½ inch No. 1 cuts and better.	62 00	64 00
2 in. No. 1 cuts and better	64 00	66 00
1½-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	52 00	54 00
4/4 No. 2 and 3 cuts		33 00
5/4 and 6/4 No. 2 and 3 cuts	42 00	44 00
8/4 No. 2 and 3 cuts	44 00	46 00
1 in. Good Shorts		45 00
1 x 4 and 5 com. and dressing	37 00	38 00
1 x 6 common and dressing ...	39 00	40 00
1 x 8 common and dressing ...	40 00	41 00
1 x 10 common and dressing ...	44 00	46 00
1 x 12 common and dressing ..	48 00	50 00
1 x 10 and 12 mill cull stocks	33 00	35 00
1 in. mill cull sidings	30 00	32 00
5/4 and 6/4 x 4 m.r., m.c. out.	38 00	40 00
5/4 and 6/4 x 5 m.r., m.c. out.	38 00	40 00
5/4 and 6/4 x 6 m.r., m.c. out.	39 00	41 00
5/4 and 6/4 x 8 m.r., m.c. out.	39 00	41 00
5/4 and 6/4 x 10 m.r., m.c. out.	45 00	47 00
5/4 and 6/4 x 12 m.r., m.c. out.	48 00	50 00
2 x 10 common	37 00	39 00
2 and 3 x 12 common	39 00	41 00
1 x 8 inch box and common..	35 00	37 00
1 x 10 inch box and common..	36 00	38 00
1 x 12 inch box and common..	38 00	40 00
1-in. mill run sidings	40 00	42 00
1-in. mill run shorts	33 00	35 00
1-in. mill run Norway	31 00	32 00
2-in. mill run Norway	33 00	35 00
Norway, c. and cf. 1-in.	40 00	42 00
Norway, c. and cf. 1½-in. ...	42 00	44 00
Norway, c. and cf. 2-in.	42 00	44 00
Spruce mill run 1-in. and 2-in.	33 00	35 00
Spruce mill culls	28 00	30 00

Hemlock, No. 1:

1 x 4 and 5-in. x 9 to 16 ft. ..		27 00
1 x 6-in. x 9 to 16 ft.	30 00	31 00
1 x 8-in. x 9 to 16 ft.	32 00	33 00
1 x 10 and 12 in. x 9 to 16 ft.	32 00	33 00
1 x 7, 9 and 11 in. x 9 to 16 ft.	30 00	31 00
1 in. No. 2, 6-ft. to 16-ft.	24 00	25 00
2 x 4 to 12, 10 and 16 ft.	30 00	31 00
2 x 4 to 12 ft., 12 and 14 ft. ..	30 00	31 00
2 x 4 to 12 in., 18 ft.	32 00	33 00
2 x 4 to 12 in., 20 ft.	33 00	34 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	24 00	25 00
Clear in. B.C. cedar, kiln dried	50 00	55 00

Douglas Fir:

Dimension Timber up to 32 feet:

8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	43 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16	44 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.	44 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.	45 00
10x20, 18x20, up to 32 ft.	45 50
6x18, 8x18, up to 32 ft.	45 50
6x20, 8x20, up to 32 ft.	45 00

Timber in lengths over 32 feet subject to negotiation.

Fir flooring, 1 x 3, edge grain..	43 50
Fir flooring, 1 x 4, edge grain..	46 50
Fir flooring, 1 x 4, flat grain..	39 50
No. 1 and 2, 1-in. clear Fir rough	50 75
No. 1 and 2, 1¼ and 1½ in., clear Fir rough	56 00
No. 1 and 2, 2-in. clear Fir rough	52 00
1½-in. No. 1, 4-ft. pine lath.	6 00
1½-in. No. 2 4-ft. lath	5 70
1½-in. 32-in. pine	2 75
1½-in. No. 1 4-ft. hemlock lath.	4 50
1½-in. mill run hemlock lath.	4 25
XX B. C. cedar shingles	3 05
XXX 6 butts to 2-in.	4 20
XXXXX	4 75

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2 in.		79 00
Ash, white, No. 1 common ...		55 00
Ash, brown, 1sts and 2nds, 4/4		60 00
Ash, brown, com. and bet. ...		48 00
Ash, brown, 1sts and 2nds, 6/4 and 8/4		68 00
Birch, 1st and 2nds, 4/4		58 00
Birch, No. 1 com. and bet., 4/4		47 00
Bich, 1st and 2nds, 6/4 and 8/4		64 00
Birch, 1st & 2nds, 10/4 and 12/4		74 00
Birch, 1st and 2nds, 16/4		82 00
Basswood, 1sts and 2nds, 4/4 ..		51 00
Basswood, No. 1 com. and bet., 4/4	45 00	47 00
Basswood, No. 2 and 3 common		28 00
Basswood, 6/4 and 8/4, 1sts and 2nds	58 00	60 00
Basswood, 6/4 and 8/4, com. and bet.		53 00
Basswood, 4/4, No. 2 com. and bet.		42 00
Soft elm, 1sts and 2nds, 4/4 ..		47 00
Soft Elm, No. 1 com. and bet., 4/4		43 00
Soft Elm, No. 2 and 3 common		24 00
Soft Elm. 6/4 and 8/4, 1 and 2		61 00
Rock Elm, 1sts and 2nds, 6/4 and 8/4		65 00
Rock Elm, No. 2 com. and bet., 6/4 and 8/4		45 00
Soft Maple, 1sts and 2nds, 4/4..		48 00
Soft Maple, com. and bet., 4/4.		38 00
Soft Maple, 6/4 and 8/4, 1sts and 2nds		55 00
Hard Maple, 1sts and 2nds, 4/4		51 00
Hard Maple, com. and bet., 4/4		43 00
Hard Maple, 12/4, 1sts and 2nds	65 00	72 00
Hard Maple, 16/4, 1sts and 2nds	82 00	85 00
Red Oak, plain, 1sts and 2nds, 4/4		62 00
Red Oak, plain, No. 1 com., 4/4		42 00
Red Oak, plain, No. 2 com., 4/4		32 00
Red Oak, plain, 1sts and 2nds, 6/4 and 8/4		75 00
Red Oak, plain, 1sts and 2nds, 12/4 and 16/4	89 00	96 00
White Oak, plain, 1sts and 2nds, 4/4		62 00
White Oak, plain, No. 1 com., 4/4		42 00
White Oak, plain, No. 2 com., 4/4		32 00
Red and White Oak, plain, 1sts and 2nds, 5/4 and 6/4	69 00	71 00
Red and White Oak, plain, No. 1 com., 5/4 and 6/4		46 00
Red and White Oak, plain, No 2 com., 5/4 and 6/4		35 00
Red and White Oak, plain, 1sts and 2nds, 8/4		76 00
Red and White Oak, plain, No 1 com., 8/4		52 00
White Oak, plain, 1sts and 2nds, 12/4 and 16/4	89 00	96 00
White Oak, ¼ cut, 1sts and 2nds, 4/4		88 00
White Oak, ¼ cut, 5/4 and 6/4 1sts and 2nds		94 00
White Oak, ¼ cut, No. 1 com.		57 00
Hickory, 1sts and 2nds, 4/4 ...		79 00
Hickory, 6/4, 1sts and 2nds..		77 00
Hickory, 8/4, 1sts and 2nds ..		84 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:

1 in. x 7-in. and up	$60 00	70 00
1¼-in. and 1½-in. x 8-in. & up	70 00	75 00
2-in. x 7-in, and up	72 00	76 00
No. 2 cuts 2 x 8-in. and up ..	45 00	50 00

Pine good strips:

1 in.	45 00	48 00
1¼-in. and 1½-in.	55 00	56 00
2-in.	56 00	57 00

Pine good shorts:

1-in. x 7-in. and up	45 00	50 00
1-in. x 4-in. to 6-in.	32 00	36 00
1¼-in. and 1½-in.	53 00	55 00
2-in.	54 00	56 00
7-in. to 9-in. A sidings	30 00	34 00
Pine, No. 1 dressing sidings ...	42 00	47 00
Pine, No. 1 dressing strips ...	40 00	43 00
Pine, No. 1 dressing shorts ...		36 00
Pine, 1-in. x 4 in. s.c. strips....		36 00
Pine, 1-in. x 5-in. s.c. strips....		37 00
Pine, 1-in. x 6-in. s.c. strips....		38 00
Pine, 1-in. x 7-in. s.c. strips....		38 00
Pine, 1 x 8-in. s.c., 12 to 16 ft.		39 00
Pine, 1-in. x 10-in. M.R.		44 00
Pine, s.c. sidings, 1½ and 2-in.	30 00	42 00
Pine, s.c. strips 1-in.		35 00
1¼, 1½ and 2-in.	36 00	37 00
Pine, s.c. shorts, 1 x 4 to 6 in.	30 00	31 00
Pine, s.c. and bet., shorts 1 x 5		32 00
Pine, s.c. and bet., shorts, 1 x 6		33 00
Pine, s.c. shorts, 6′-11′, 1″x 10″		36 00

Pine box boards:

1″x 4″ and up, 6′-11′		26 00
1″x 3″, 12′-16′		26 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up		28 00
and up, 6-ft. to 11-ft.		26 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.		25 00
O. culls r & w p	18 00	20 00

Red Pine, log run:

mill culls out, 1-in.	28 00	30 00
mill culls out, 1¼-in.	32 00	33 00
mill culls out, 1½-in.	32 00	33 00
mill culls out, 2-in.	34 00	36 00
mill culls, white pine, 1″x 7″ and up		31 00

Mill run Spruce:

1″x 4″ and up, 6′ 11′	24 00	25 00
1″x 4″ and up, 12′-16′		30 00
1″x 9″-10″ and up, 12′-16′		36 00
1¼″x 7″ 8-9″ and up, 12′-16′		35 00
1¼″x 10″ and up, 12′-16′ ...		36 00
1½″ & 2″x12″ and up, 12′-16′		40 00
Spruce, 1-in. clear (fine dressing and B)		37 00
Hemlock, 1-in. cull	18 00	20 00
Hemlock, 1-in. log run	23 00	24 00
Hemlock, 2x4, 6, 8, 10, 12/16′ ..	26 00	28 00
Tamarac	24 00	26 00
Basswood, log run, dead culls out	30 00	40 00
Basswood, log run, mill culls out	26 00	28 00
Birch, log run	30 00	32 00
Soft Elm, common and better, 1, 1½, 2-in.	25 00	30 00
Ash, black, log run	32 00	40 00
1 x 10 No. 1 barn	40 00	45 00
1 x 10 No. 2 barn	38 00	40 00
1 x 8 and 9 No. 2 barn		38 00

Lath per M:

No. 1 white pine, 1½-in. x 4-ft.	5 50	5 75
No. 2 white pine		5 25
Mill run white pine		5 50
Spruce, mill run 1½-in.		5 00
Red pine, mill run		4 75
Hemlock, mill run		4 00
32-in. lath		2 25

White Cedar Shingles:

xxxx, 18-in.		5 00
Clear butt, 18-in.		4 00
18-in. xx		2 75
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

White Pine

	cts.	
First-class Ottawa waney, 18-in. average, according to lineal.	75	80

Oak

According to average and quality	65	75

Elm

According to average and quality, 40 to 45 feet	80	85
According to average and quality, 30 to 35 feet	55	65

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Birch Planks

1 to 4 in.	20 00	25 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$74 00
1 in., 8 in. and up wide	83 00
1¼ and 1½ in. and up wide	86 00
2 in. and up wide	88 00

Cuts and Better

4/4 x 8 and up No. 1 and better	58 00
6/4 x 8 and up No. 1 and better	72 00
8/4 x 8 and up No. 1 and better	74 00
6/4 x 6 and up No. 2 and better	61 00
8/4 x 6 and up No. 2 and better	63 00
6/4 x 6 and up No. 3 and better	55 00
8/4 x 6 and up No. 3 and better	59 00

No. 1 Cuts

1 in., 8 in. and up wide	50 00
1¼ in., 8 in. and up wide	60 00
1½ in., 8 in. and up wide	61 00
2 in., 8 in. and up wide	65 00
2½ and 3, 8 in. and up wide	84 00
4 in., 8 in. and up wide	90 00

No. 2 Cuts

1 in., 6 in. and up wide	38 00
1¼ in., 6 in. and up wide	51 00
1½ in., 6 in. and up wide	52 00
2 in., 6 in and up wide	55 00
2½, 3 and 4 in., 6 in. and up wide..	70 00

No. 3 Cuts

1 in., 6-in. and up wide		33 00
1¼ and 1½ in., 6 in. and up wide		38 00
2 in., 6-in. and up wide		39 00
2½, 3 and 4-in., 6 in. and up wide	45 00	48 00

Common and Dressing Mill Run

1 in. x 4-in.	36 00
1-in. x 5-in.	37 00
1-in. x 6-in.	39 00
1-in. x 8 in.	40 00
1-in. x 10-in.	41 00
1-in. x 12-in.	47 00
1-in. x 13-in. and up	47 00
1¼, 1½ and 2 in.	47 00

No. 1 Barn

1 inch	40 00	52 00
1¼, 1½ and 2-in.	50 00	54 00
2½ and 3-in.		60 00
4 inch		62 00

No. 2 Barn

1 inch	40 00	45 00
1¼, 1½ and 2-in.	43 00	48 00
2½ and 3-in.		50 00

No. 3 Barn

1 inch	36 00	42 00
No. 1, 1, 1¼, 1½, 2-in.		43 00

Box

No. 1, 1, 1¼, 1½, 2-in.	32 00	35 00
No. 2, 1¼, 1½, 2-in.		29 00

Mill Culls

Mill run culls, 1-in.		29 00
1, 1¼, 1½ and 2-in.		30 00
No. 2	27 00	29 00

Lath

No. 1, 32-in. pine	2 15
No. 2, 48-in. pine	5 25
No. 1, 48-in. pine	5 75
No. 3, 48-in. pine	4 75
Hemlock Lath, 48-in.	4 75

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac.

Dimension. S. 1 S. and 1 E.

	6 ft.	8 ft.	10 ft.	14 & 16 ft.
2 x 4, 6, 8 ..	16 00	19 00	22 50	23 50
2 x 10	20 00	20 50	23 50	24 50
2 x 12	20 00	21 00	25 50	25 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH.

Mountain Stock.

Dimension.

2 x 4, 8, 12, 14, 16	23 50
2 x 4, 10, 18, 20	25 50
2 x 6, 8 to 16	23 50
2 x 8, 8 to 16	23 50
2 x 4 6 and 8 in.; 24, 26, 28, 30, 32 ft.	31 50
2 x 10 and 2 x 12; 8-16 ft.	28 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	30 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	32 50

No. 1 Common Boards.

4 inch	23 00
6 inch	25 50
8, 10, 12 inch	27 50
Mixed widths	26 50

Flooring.

4 or 6 inch No. 1	37 00
4 or 6 inch No. 2	32 00
4 or 6 inch No. 3	26 00

Shiplap—Finished.

6 inch	24 00
8, 10 and 12 inch	25 00

Siding.

6 inch No. 1	37 00
6 inch No. 2	35 00
6 inch No. 3	27 00

Lath.

No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50

PINE—ROUGH TIMBER.

3 x 6 in.; 8 to 16 ft.	29 10
3 x 8 in.; 8 to 16 ft.	26 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	29 00
4 x 10 to 10 x 10, 8 x 8, 6x 12 in. up to 32 ft.	31 00

BRITISH COLUMBIA COAST FIR.

Dimension S1S and E.

2 x 4 in.; 6 and 8 ft.	22 50
2 x 4 in.; 12 and 14 ft.	23 50
2 x 4 in.; 10 and 16 ft.	24 50
2 x 4 in.; 18 and 24 ft.	25 50
2 x 4 in.; 22 and 24 ft.	26 50
2 x 4 in.; 26 to 32 ft.	28 50
2 x 10 and 2 x 12 in.; 10 to 16 ft. ...	25 00
2 x 10 and 2 x 12 in.; 18 and 20 ft. ..	27 00
2 x 10 and 2 x 12 in.; 22 and 24 ft. ..	28 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	30 00
2 x 14 in.; 10 to 16 ft.	30 00
2 x 14 in.; 18 and 20 ft.	32 00
2 x 14 in.; 22 and 24 ft.	33 00
2 x 14 in.; 26 to 32 ft.	35 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	26 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	27 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	28 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	29 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	31 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	29 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	30 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	30 50

FLOORING.

Nos. 1 and 2, 1 x 3 in., E. G.	37 00
Nos 1 and 2, 1 x 4 in., E. G.	40 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in. F. G.	30 00
Nos. 1 and 2, 1 x 6 in., F G.	35 00
No. 3, 1 x 4 in.	28 00
No. 3, 1 x 6 in.	33 00

No. 3 Edge grain $3 per M. extra.

SHIPLAP.

B. C. fir, 6 in.	23 50
B. C. fir, 8, 10, 12 in.; 8 to 16 ft.	24 50
No. 2 shiplap, 6 in.	23 50
No. 2 shiplap, 8, 10 and 12 in.	24 50

FIR, COMMON BOARDS, S1S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	22 00
Common boards, 8 to 12 in.	23 00
No. 2 mixed widths	18 00
No. 2 boards, 8 to 12 in.	19 00

SHINGLES.

XXX B. C. cedar	3 05

LATH.

Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's	4 50
Cedar lath, ⅜ x 1⅜ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

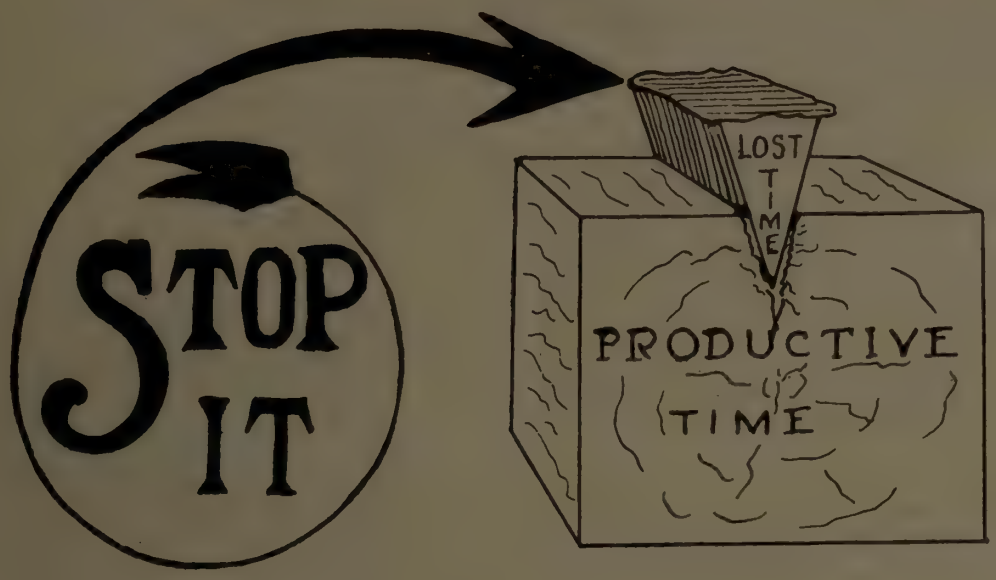
White Pine

Wholesale Selling Price

Uppers, 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00
No. 1 Moulding 8/4	62 00

(Continued on page 58)

A Dangerous Wedge



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No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda.

MAPLE

	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	43 - 45	25 - 27	15 - 17
5/4 to 8/4	55 - 57	33 - 35	17 - 21
10/4 to 16/4	65 - 67	45 - 47	25 - 27

RED BIRCH

4/4	58 - 60	38 - 40	22 - 24
5/4 to 8/4	60 - 62	40 - 42	24 - 26

SAP BIRCH

4/4	48 - 50	32 - 34	20 - 22
5/4 and up	50 - 52	34 - 36	22 - 24

SOFT ELM

4/4	40 - 42	28 - 30	20 - 22
5, 6 & 8/4	42 - 44	30 - 32	20 - 22

BASSWOOD

4/4	44 - 46	34 - 36	22 - 24
Thicker	42 - 44	32 - 34	22 - 24

PLAIN OAK

4/4	52 - 54	33 - 35	19 - 21
5/4 to 8/4	51 - 53	29 - 31	17 - 19

ASH, WHITE AND BROWN

4/4	51 - 54	29 - 31	19 - 21
5/4 to 8/4	61 - 64	34 - 36	20 - 22
10/4 and up	74 - 87	46 - 48	22 - 24

BOSTON, MASS.

White pine uppers, 1 to 2 in.		119 00
Selects, 1 to 2 in.	106 00	109 00
Fine common, 1 in.		78 00
Fine common, 1¼ to 2 in.	85 00	87 00
No. 1 Cuts, 1 in.		60 00
No. 1 Cuts, 1¼ to 2 in.	70 00	75 00
No. 2 Cuts, 1 in.		49 00
No. 2 Cuts, 1¼ to 2 in.	60 00	66 00
Barn Boards, No. 1, 1 x 12		55 00
No. 1, 1 x 10		55 00
No. 1, 1 x 8		52 00
No. 2, 1 x 12		57 00
No. 2, 1 x 10		52 00
No. 2, 1 x 8		49 00
No. 3, 1 x 12		49 00
No. 3, 1 x 10		48 00
No. 3, 1 x 8		46 00
Canadian spruce boards		36 00
Spruce, 12 in. dimension		46 00
Spruce, 10 in. dimension		44 00
Spruce, 9 in. dimension		43 00
Spruce, 8 in. under dimen.		40 00
10 and 12 in. random lengths, 8 ft. and up	42 00	43 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7,		31 00
3 x 4 and 4 x 4 in.		32 00
2 x 8 in.		37 00
All other random lengths, 7-in. and under, 8 ft. and up	31 00	32 00
5-inch and up merchantable boards, 8 ft. and up, p 1s		35 00
1 x 2		30 00
1 x 3		28 00
1½-in. spruce lath		4 00
1½-in. spruce lath		4 35

New Brunswick Cedar Shingles

Extras		4 50
Clears		4 15
Second Clears	3 25	3 50
Clear whites		2 50
Extra 1s (Clear whites in)	1 75	2 25
Extra 1s (Clear whites out)	1 65	1 80
Red Cedar Extras, 16-in. 5 butts to 2-in.		5 00
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		5 40
Red Cedar Perfections, 5 butts to 2¼		6 00
Washington 16-in. 5 butts to 2-in. extra red cedar.		5 00

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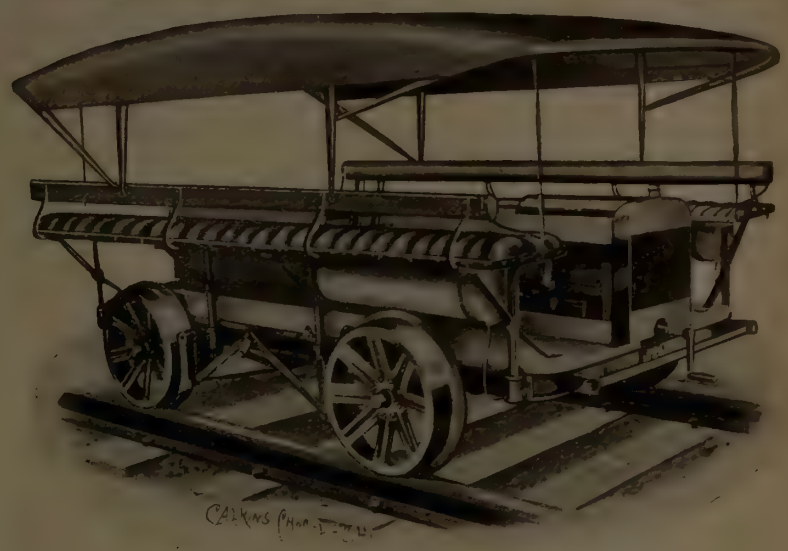

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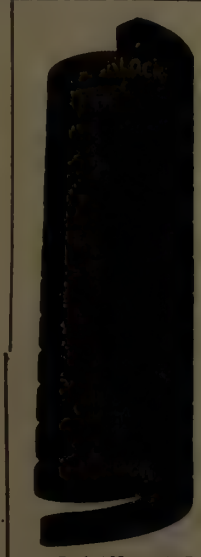

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(Continued on page 64)

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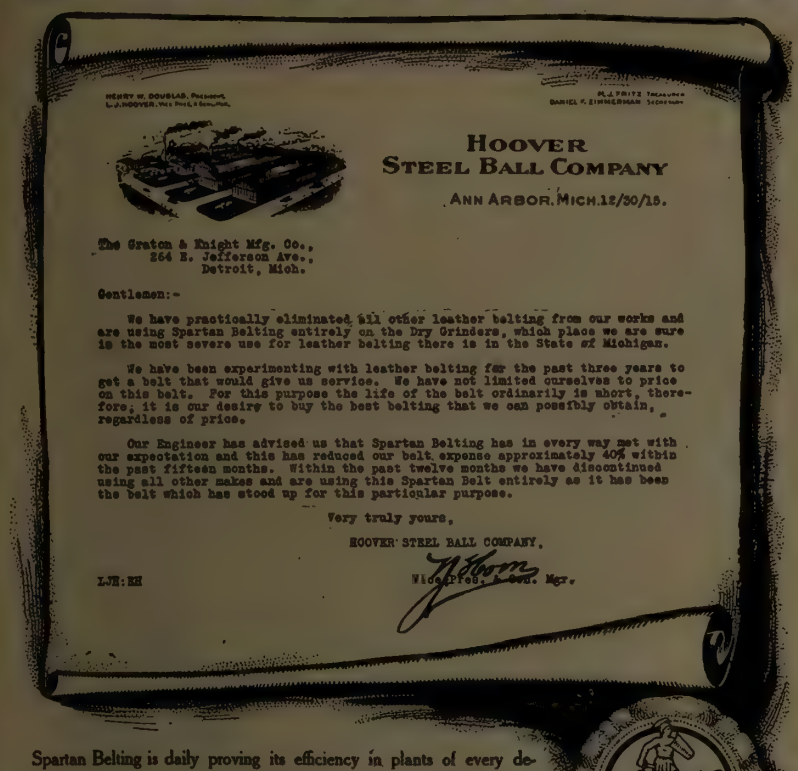

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For the reason that they cut cool and clean and fast, even when forced to the limit—and they hold their shape—show long life.

There is nothing superior to Aloxite for steel grinding—it is hard, sharp and of just the right degree of toughness and Aloxite Saw Gumming wheels are

The Right Wheels in the Right Place

Suppose you let Carborundum service help you to better grinding service.

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Gendron Penetang Shoepack Co.
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SLEEPING ROBES
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SODA PULP PLANTS
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Arkansas Land & Lumber Company
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ATKINS

ALWAYS AHEAD!

The most advanced improvements in Saw manufacture have placed us far ahead in the manufacture of Saws for all uses.

Our Band and Circular Saws are worthy examples. They cut more timber—do it with less power and require less repair to be kept in perfect condition.

Economy in mill operation has proved their value. Put them through competitive tests with other Saws.

The Sterling quality of

Atkins Sterling Steel Saws

will overcome your difficulties.

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Government Contractors and the largest Manufacturers and Dealers in Canada of

Lumbermen's Tents, Bed Ticks, Grey Blankets, Nose Bags, Waterproof Goods, Steel Ranges and General Camp Outfits.

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CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. **Get Catalog "H."**

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
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"ASBESTOL" Gloves and Mittens mean a "Better Day's Work."

They're built for service and comfort and their wear resisting qualities have made them popular in lumber camps everywhere.

"ASBESTOL" Gloves and Mittens afford the greatest hand protection that can be had. Weather-proof and snow-proof and soft and pliable all the time.

ASBESTOL
REG. IN U.S.PAT.OFF.

EISENDRATH'S CELEBRATED HORSE HIDE

Be sure you get "ASBESTOL" every time you buy work gloves or mittens. Insist upon having them and no other kind. Don't let anybody tell you that there is anything as good as "ASBESTOL." We make 'em and we know that "ASBESTOL" is the best work glove manufactured today.

Notice to Jobbers:

If you are not selling "ASBESTOL" Gloves and Mittens now get busy and stock them for your trade.

Eisendrath Glove Company

2001 Elston Ave. - - CHICAGO

LOGGING LOCOMOTIVES

Locomotives on trunk line railroads have the advantage of the best facilities for inspection and repairs.

Logging locomotives face different conditions. They must work day after day in the hardest service, and often in localities where repairs cannot be made without great inconvenience. That is why we build our logging locomotives from interchangeable stock parts. With this system every part must fit every other locomotive of the same size and design, and long delays waiting for duplicate parts are avoided. Interchangeable parts kept on hand at our Works for prompt shipment

MONTREAL LOCOMOTIVE WORKS, LIMITED,

DOMINION EXPRESS BUILDING, MONTREAL, CANADA.

Steel Saw Carriage

The illustration shows our 3-block standard steel saw-mill carriage, the knees of which recede 44" from saw line. This carriage can be furnished in any number of head blocks or axles, also equipped with steam set works attached to either our No. 3 or No. 4 set.

The carriage is carefully designed throughout and is giving excellent service in mills all over Canada.

When you overhaul your mill

don't waste money on extensive repairs to machines whose days are done. You will save money both in your operating costs and in the improved quality of your lumber if you install new "Long" saw mill machinery.

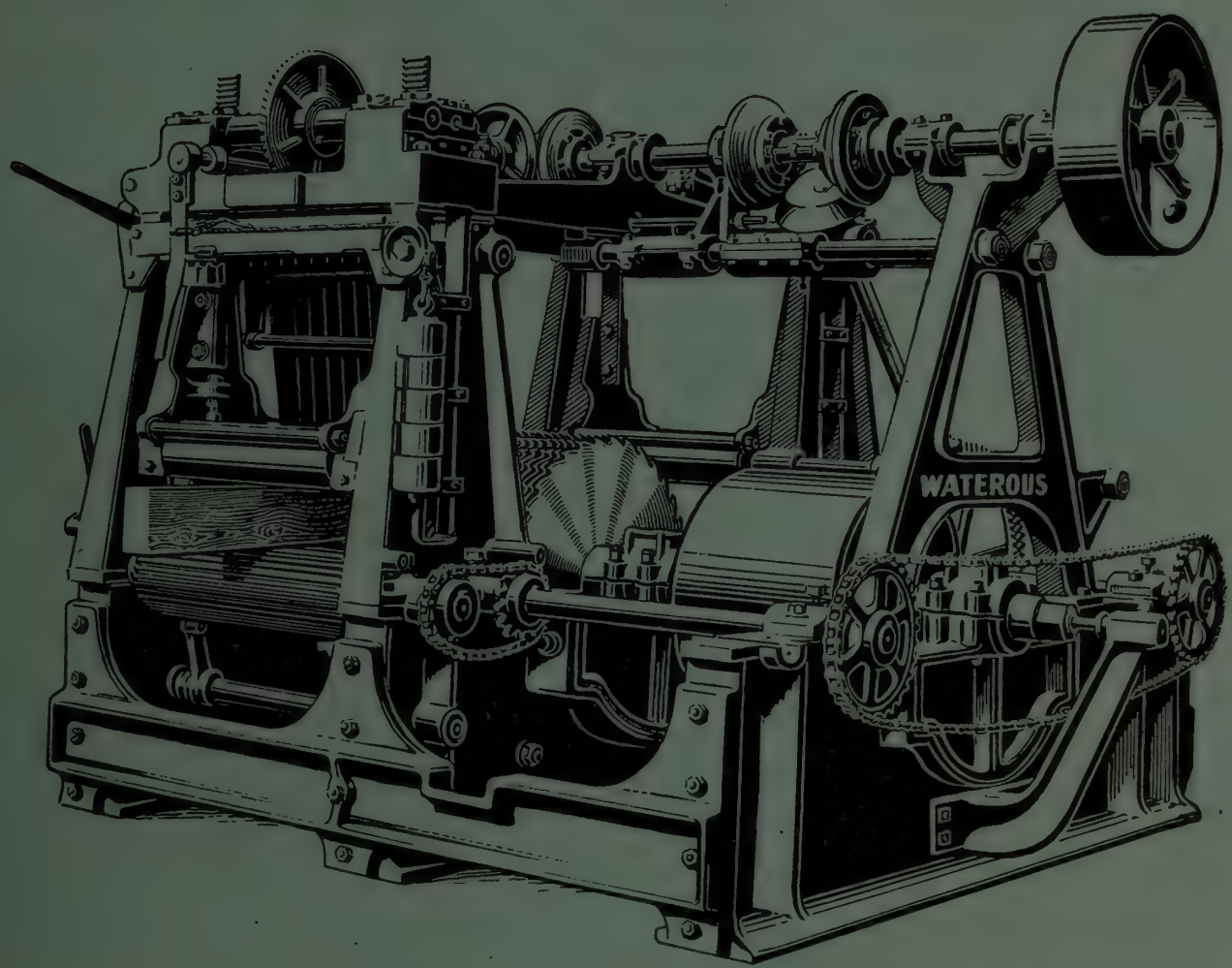
Let us talk to you before you start to overhaul

The E. Long Manufacturing

Company, Limited

Orillia - Ontario

The 1917 Model Kendall Circular Gang



A New Machine That IS New

This illustration shows the latest development of the Kendall Circular Gang.

It takes cants from 4 in. to 12 in. thickness at the rate of from 2500 to 3000 a day, will turn them into lumber, perfect in finish and cut evenly from end to end.

Big capacity on small logs, and lumber cut better than is possible on Band Saw, Circular or Vertical Gang, distinguish this machine.

It meets the demand for a machine that will turn small logs into merchantable lumber economically. Those already in use have proven their worth.

While all good points of previous models are retained, such weaknesses that use has made apparent have been eliminated. The new features and better construction of this 1917 Kendall Gang meant an appreciable increase in capacity, in nice cutting ability, and in safety, convenience and sturdiness.

This latest development of the Kendall Gang patents is built in a shop that has specialized in high class machinery construction—that has built machinery for Canadian sawmills for more than fifty years. Our reputation is a guarantee that this New Model Kendall Gang is built as it should be.

When you investigate the Circular Gang question see that you get facts and figures of the "WATEROUS KENDALL GANG"—the New Machine that IS New.

The Waterous Engine Works Co., Limited

BRANTFORD, CANADA

"FROST KING" METAL

$5,000,000.00
worth of mixed metal sold annually.

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. Price 30c per lb., Fort William and East; West of Fort William 35c per lb., delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our TROJAN BABBITT will stand where all other metals will fail. Price, Fort William and East, 40c per lb.; West of Fort William, 45c, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

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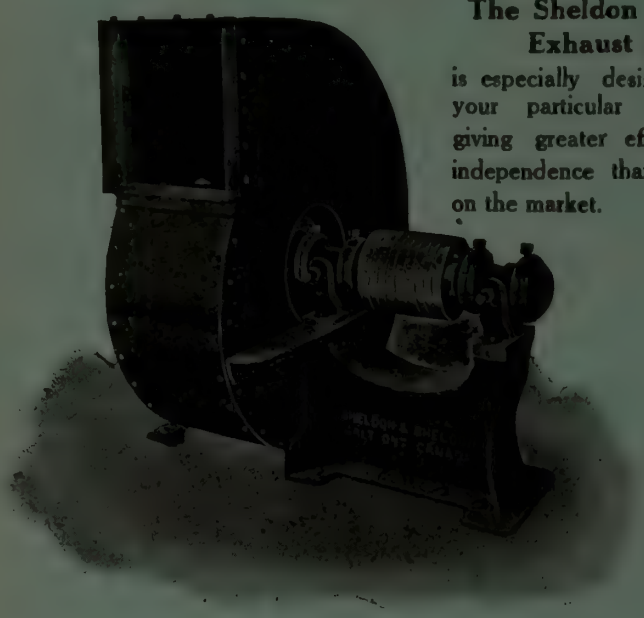
Every Manufacturer in the Lumber Industry realizes that to be "up-to-date" their Factory should be installed with **Shaving Exhaust Fans.**



The Sheldon Shaving Exhaust Fan
is especially designed to suit your particular requirements giving greater efficiency and independence than any other on the market.

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The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
We manufacture all kinds of lumber tools. Light and Durable.

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It's a Pink anyway you take it, and it's the best Peavey made

The Thomas Pink Company, Limited

Manufacturers of Lumber Tools

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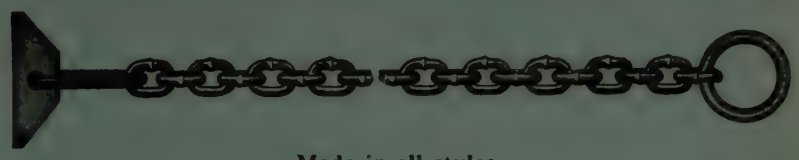
Canada Lumberman & Wood Worker

New **RAILS** Relaying
12 to 80 pounds per yard.
LOGGING CARS
Jno. J. Gartshore
58 Front St. West, Toronto



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Made in Canada Write to Fully Guaranteed
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A circular shear cut head that is unsurpassed as a Jointing Head for stock from 1″ to 3″; always ready for the job without a set up, saving you money, and assuring a perfect square joint. Made in four, six or eight bits with or without Self Centreing Colet.

Write for Prices
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Successors to Samuel J. Shimer & Sons

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We manufacture practically every article that can be made of Asbestos—including
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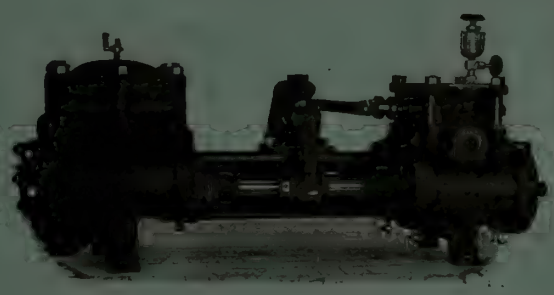

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PUMPS
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Careful Design
The Best of Workmanship and Material
Find out the meaning of "Smart-Turner Service"
The Smart-Turner Machine Co., Ltd., HAMILTON CANADA

River Ouelle Pulp & Lumber Co.
Manufacturers of
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Lumber Lath Pulpwood
Head Office and Mills at:
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On I. C. Ry. 75 Miles East of Quebec City
Also Mills at:
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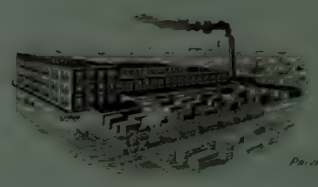
The Only Loose Pulley



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DOORS SASH AND INTERIOR TRIM

Private Phone Exchange

East Toronto June 17/10

Chapman Double
Ball Bearing Co

Dear Sirs
in regard to double ball bearings supplied by you, we find those on line shafts giving entire satisfaction and find them quite a saving on power, as for the ball bearing loose pulleys, they are decidedly the finest, and only satisfactory loose pulley we have ever had, no noise no heating and consequently no loss of time, which so frequently occurs with the ordinary loose pulley, we have run the loose pulleys on our big matcher for nearly two years and consider it a severe test and it runs as nice to day as the first day we used it can recommend your bearings and pulleys to any one in the manufacturing business especially planing mill work which we have proved

Yours very truly
L A DeLaplante Limited
per W. Graham Supt

Chapman Double Ball Bearings

have been installed in over 3000 factories of all classes during the past fifteen years, and the above letter is one of many of a similar import, bearing testimony to the efficiency, long life, and cleanliness of the bearing. Some of these have been compiled in a booklet, "Results", which we will be pleased to send on request.

Chapman Double Ball Bearing Co., Ltd.

337-351 Sorauren Avenue, TORONTO

Transmission Ball Bearing Co., Inc., 1050 Military Road, Buffalo, N. Y.

SPRUCE

1916 SAWING

Merchantable

2 x 4 x 10/16	-	33,368'	2 x 6 x 10/16	-	5,459'
2 x 5	-	22,704'	2 x 7 x 10/16	-	77,272'

1917 SAWING

Merchantable

1 x 3 x 10/16	-	128,360'	2 x 4 x 8/16	-	218,053'
1 x 4 "	-	286,212'	2 x 5 "	-	134,920'
1 x 5 "	-	80,514'	2 x 6 "	-	61,630'
1 x 6 "	-	30,004'	2 x 7 "	-	39,586'
1 x 7 and up	-	19,760'	2 x 8 "	-	16,360'
1 x 3 and up x 6/10		33,613'	2 x 9 and up	-	9,000'

Mill Culls

1 x 3 and up x 6/16 - 47,200' 2 x 4 and up x 6/16 - 62,500' 3 x 6 and up x 6/16 - 118,819'

Merchantable Spruce Lath 1½ x 4'—1,500,000 pieces

Bartram & Ball Limited

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Drummond Bldg., 511 St. Catherine St. West, Montreal, Que.

B.C. Fir Lumber and Timbers

Rough or Dressed

On account of the uncertainty of car and mill supply, we are offering only material that is in transit. We then know that we can deliver these cars when promised.

KNOX BROTHERS B.C. FIR SPECIALISTS K

Wire us your enquiries.

Cars Now in Transit:

Flooring
Ceiling
Rough Clear Fir, Kiln Dried
Ship-Decking
Timbers
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Tank Stock
Ship Timbers and Planking

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Sole representatives of The Victoria Lumber & Manufacturing Company, Ltd., in Eastern Ontario, Quebec and Maritime Provinces.

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Clear Kiln Dried B.C. Douglas Fir

We can make prompt shipment on straight or mixed cars of clear kiln dried B.C. Douglas Fir in all sizes rough or dressed. Also flooring. ceiling, mouldings and siding,

If quality can talk to you—get in touch with us.

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Head Office and Mill

CHEMAINUS, B. C.

Eastern Sales Office:

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R. G. Chesbro, Rep.

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

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Fassett, Que.

In Good Shipping Condition
Want to Move

AT ARNPRIOR

50,000 1 x 4—12 to 16 ft. Mill Run White Pine Strips
30,000 1 x 5—12 to 16 ft. " " "
30,000 1 x 6—12 to 16 ft. " " "
50,000 1 x 8 and up 12 to 16 No. 1 Mill Cull White Pine
100,000 1 x 12—12 to 16 No. 2 " "

AT CACHE BAY

50,000 1 x 10 and 12—10 to 16 No. 1 Mill Cull White Pine

AT MIDLAND

1 Car 1 x 6—10 to 16 Mill Run White Pine
1 Car 1 x 12— " " "

The Long Lumber Company
Hamilton
Canada

Rubber Goods
FOR LUMBERMEN

Belting Our long experience in the making of Rubber Belts enables us to specialize on this line. "P.M.S.," "Special Drive" and "Lion" are our leading brands for power transmission.

Packings "Redstone" High Pressure Sheet Packing has proved by test that it will outlast any other similar packing on the market. We make Spiral and Ring Packings, etc., that are equally reliable.

Hose for Steam, Water, etc., in various grades, made especially to give satisfactory and economical service under different conditions.

Fire Hose One or more of our twenty brands of Fire Hose will be found, not only in the best equipped Factories, Mills, etc., but in almost every Fire Department in the Dominion.

Gutta Percha & Rubber, Limited

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George Gordon & Co.

Limited

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Manufacturers of

RED and WHITE PINE

PLANING MILL **DRY KILN**

The Cheapest, Quickest— Most Reliable way to convey lumber away from saws and to and from cars.

Mathews Steel Ball Bearing Lumber Carrier will convey your product by Gravity at a grade of 4%. (½" fall per ft.)

Mathews Conveyor as used by Vancouver Lumber Co., at Roche Point, B. C.

Canadian Mathews Gravity Carrier Company, Limited

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Manufacturers of

Lumber, Lath and Shingles

Mills at Victoria Harbor, Ont.

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Wholesale Lumber Dealers and Selling Agents for

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Mills at

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White Pine
Red Pine
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Lumbermen and General Contractors

Railway Ties and Pulpwood

PILING

Rough and Dressed Lumber and Lath

MILLS AT NICHOLSON, ONTARIO

WHITE PINE
JACK PINE
SPRUCE
HEMLOCK
LATH
HARDWOODS

Special in Lath
32 in. Lath in Pine, Spruce and Hemlock

Vancouver Branch
625 Birks Bldg.
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T & G QUALITY BRAND
British Columbia Red Cedar Shingles

Terry & Gordon

Wholesale Lumber Merchants

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The British Columbia Mills Timber & Trading Company
VANCOUVER, B. C.

Special!

N.B. White Cedar Shingles

13 Cars No. 1 (Cull)
12 Cars Extra No. 1
6 Cars Clear Walls

Very attractive prices will be quoted on the above for quick shipment.

Montreal, P.Q., Branch
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Watson & Todd Limited
OTTAWA

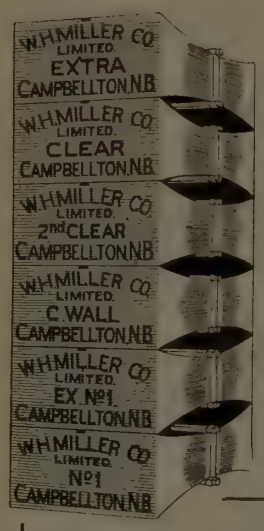
WHITE PINE
NORWAY

The
Harris Tie & Timber Co.
Ottawa - Canada

Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

Let us quote on your requirements for

Spruce and Pine Lumber



We manufacture and export all kinds of it.

WE ALSO MANUFACTURE

LATHS and TIES
PULPWOOD

Shipments by rail and water

Prompt--reliable--carefully handled

We Specialize in
New Brunswick White Cedar Shingles
LET US QUOTE YOU

W. H. Miller Co., Limited
Campbellton, N.B.

Facilities

WE HAVE THE FACILITIES for the efficient handling of Heavy Building and Bridge Timbers.

The illustration shows our Jumbo Planer for dressing big timbers.

Let us quote on your requirements.

The Boake Mfg. Co., Limited
TORONTO, ONT.

Crescent Lumber Company
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— SPECIALTIES —

TIMBER - DIMENSION - FINISH

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EXCELSIOR LUMBER CO.
33 RICHMOND ST. WEST, TORONTO

OFFER

The following stock of **HEMLOCK**
to be drawn out and loaded last November and first part of December.

6,000 feet 2 x 6, 8 and 10 18/20 ft.	Best	Log Run Hemlock.
9,000 feet 2 x 10—16	"	"
9,000 feet 2 x 8—16	"	"
2,000 feet 2 x 6—16	"	"
3,500 feet 2 x 4—16	"	"
7,000 feet 2 x 10—14	"	"
7,000 feet 2 x 8—14	"	"
1,500 feet 2 x 6—14	"	"
3,000 feet 2 x 4—14	"	"
6,000 feet 2 x 10—12	"	"
8,000 feet 2 x 8—12	"	"
4,500 feet 2 x 6—12	"	"
8 000 feet 2 x 4—12	"	"
2,000 feet 2 x 10—8 10	"	"
2,500 feet 2 x 8—8 10	"	"
2,500 feet 2 x 6—8 10	"	"
13,000 feet 2 x 4—10	"	"
6,000 feet 2 x 4—6/9	"	"

DRESSING IN TRANSIT

If you have any lumber on the Intercolonial Railway or connecting lines that you want to be milled, write for our price list.

SAVOIE & CO.

Manseau, Que.

Have the following lumber ready for shipment:

1 carload 4 x 4 Tamarack, fifth quality and better.

4 carloads "Second Clear" Shingles. 1 carload Cull Lath.

Are open to contract for 3,000 cords of rough pulpwood for next winter and spring delivery.

MACHINERY FOR SALE—2 Re-sawing Machines. 1 Log Haul-up. 1 5 x 10 Boiler.

MACHINERY WANTED—One good second hand Fast Feed Matcher.

FOR SALE

1 car 8/4" Hard Maple, Log Run, Culls Out.
5 " 5/8" Spruce, Mill Culls
5 " 5/8" Spruce, No. 1.
4 " 4/4 Quebec Brown Ash, Log Run, Culls Out.
4 " 4 in., 5 in., 6 in., 7 in. Spruce Box Stock, already milled. Suitable for Bethlehem Box.
1 " 6/4" Arkansas Soft Elm, No. 1 C. & M. Seventy per cent. 12 and 16 feet.

I want to buy 4/4, 5/4 winter sawn Basswood

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207 Weber Chambers, **KITCHENER, Ont.**

Canadian Representative D. E. HEWITT LUMBER CO., Huntington, West Va.

G. M. FRENCH

Wholesale

Lumber, Lath Shingles

RENFREW - - ONT.

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SPECIAL PRICES

The Preservation of Structural Timber, by Howard F. Weiss. Published in 1915 by McGraw-Hill Book Company. 312 pages, illustrated. Price $3.00.

Scribner's Lumber & Log Book, 1917 Edition. Price 35c.

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Utilization of Wood-Waste (Second Revised Edition), by Ernst Hubbard. Published in 1915 by Scott, Greenwood & Sons. 192 pages, illustrated. Price $1.50.

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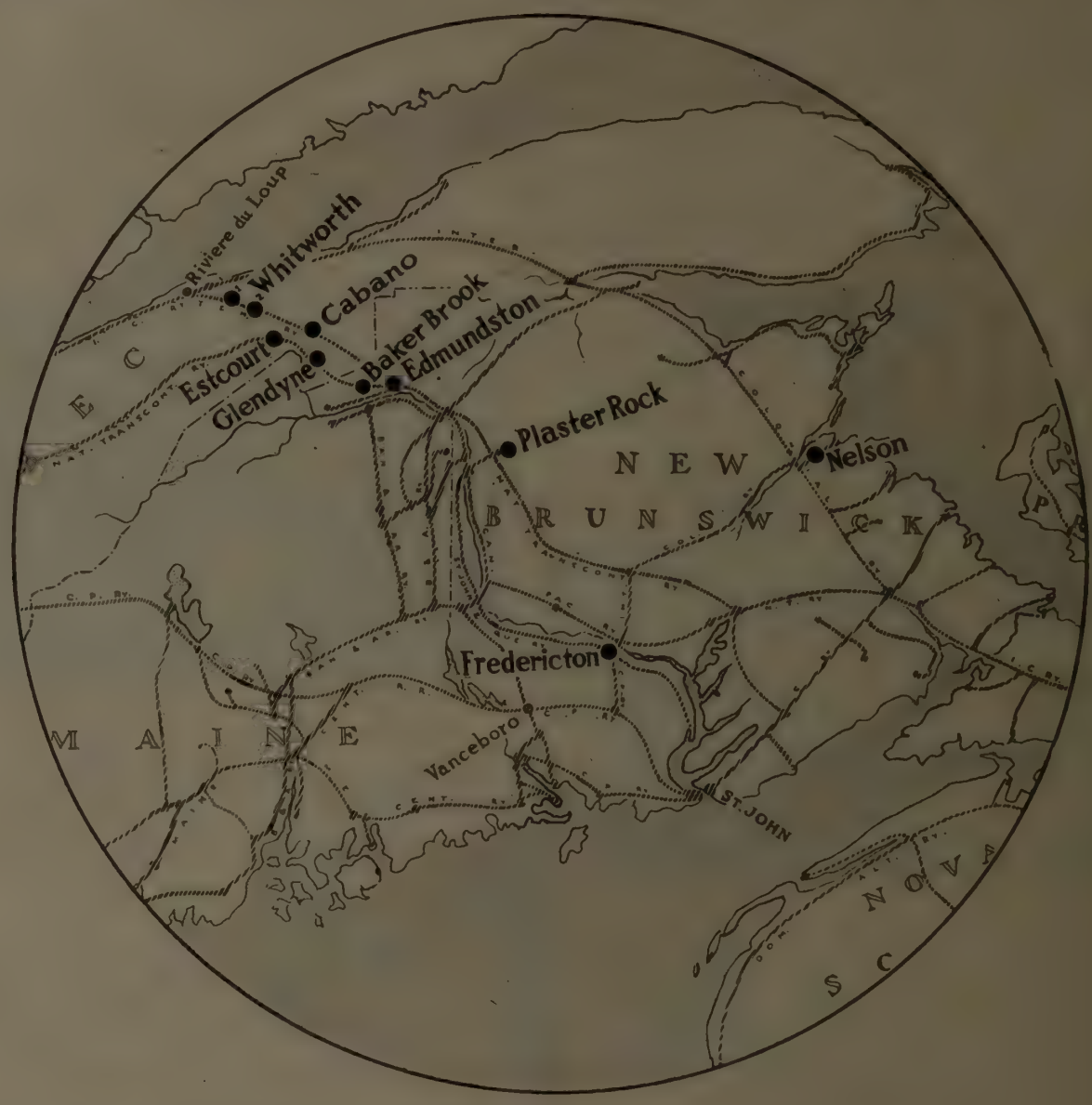

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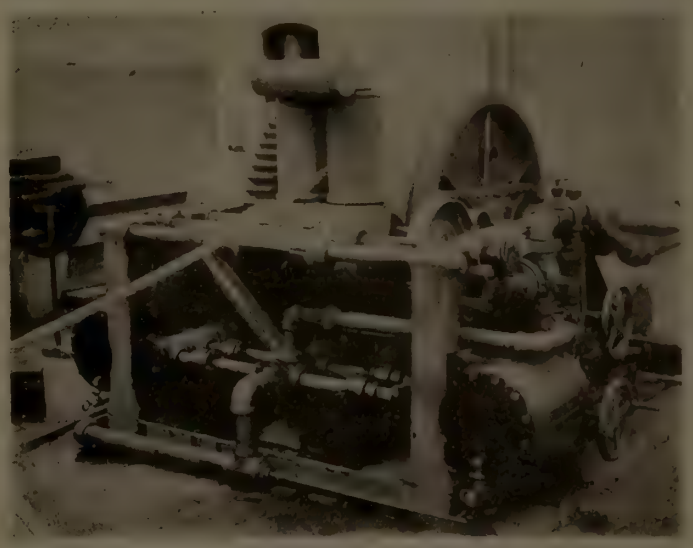

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TERMS OF SUBSCRIPTION

Canada, United States and Great Britain, $2.00 per year, in advance; other foreign countries embraced in the General Postal Union, $3.00.

Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster-General for Canada, for transmission as second-class matter.

Entered as second-class matter July 18th, 1914, at the Postoffice at Buffalo, N.Y., under the Act of Congress of March 3, 1879.

Vol. 37 **Toronto, November 1, 1917** **No. 21**

Are Canadians Alive to the Portable House Opportunities?

In the early days of the war there was much talk in Canada about the portable house trade that was expected to develop in connection with the reconstruction of the portions of France and Belgium which had been devastated by the war. It was clearly seen by those who gave the matter attention that a great demand would spring up for portable houses in which the homeless population could be sheltered temporarily until more substantial dwellings could be erected. An association was formed in Ontario for the purpose of studying the situation, and, so far as we have been able to learn, the outcome of its work was the sending of a man to France in connection with a government commission which enquired into trade opportunities in general; also the preparation of a few sample houses which were shipped to France and erected there in locations where the people would be able to see what Canadian manufacturers can produce. Also a report was published by the government commission after its return. As to actual going after the trade and securing orders for houses, there seems to have been very little accomplished.

It is not our intention to make any definite statements in regard to this situation, but to lay it before the woodworking industry once more and ask them if they think they have done all they can. There seems to have been an inclination, on the part of those who gave the matter some attention formerly, to consider that the time for getting this kind of business has not yet arrived, and that the best they could do was to make known their readiness to handle the trade whenever it should develop. In the meantime orders for shell boxes and many other products required because of the war have turned up, to save the woodworking business from stagnation, and it looks as though interest in the portable house business has been allowed to drop. In connection with many matters relating to the war there has been so much secrecy and censorship that it is difficult to lay one's finger on the actual cause of any given situation. It may be that the portable house business has not yet reached a definite enough stage to warrant going after it aggressively. It may be, on the other hand, that this is not the case, and that the woodworking firms of Canada which ought to be interested have been neglecting one of the greatest opportunities that ever presented itself; also that the Department of Trade and Commerce has been asleep at the switch while the traffic has been rushing forward in the wrong direction.

In order to put the matter before Canadians in the light of those who feel that our manufacturers have not been alive to their opportunities the best thing we can do is to refer to a letter which we received recently from a prominent business man who is in a good position to learn what is being done elsewhere, notably in the United States. We are not able to publish the name of the writer of this letter, but we can vouch for the fact that he has his ear very close to the ground and gets his information from very good sources.

"Some time ago," he says, "there were a number of editorial comments in the Canada Lumberman on this subject, but it would appear that very little interest was awakened in the minds of people who are finding business rather dull, and might have taken it into account and have been most benefited.

"I was talking to-day with a live wire from the United States. He was most surprised to notice, in his travels, the apparent lack of interest, or grasp of opportunity, or whatever else it might be, on the part of Canadian builders who have not gone after this business or taken it into account. In his conversation a number of concerns in the United States were mentioned, and the approximate number of houses that they have orders for. Some of these orders were for very large amounts.

"Even one of these large orders, or a portion of it, to say nothing of a reasonable share of all the orders, would be a great thing for the Canadian industry. Has the subject died a natural death for lack of capital, shortage of lumber, difficulty in regard to credits, or procrastination, waiting till the war is over and orders are sent here with the request 'please make for us, etc.?'

"My informant says that the United States Government is creating worlds of business for United States concerns—business of every description, and is meeting the requirements of the allied governments overseas. It would seem that a large volume of business is being lost to Canadians, but surely it is not through any lack of their having been advised. As I remember, the subject was well handled in the Canada Lumberman in the early days."

As the writer intimates, we did devote a lot of space to the discussion of this matter, and hoped that it would result in something practical being done. So far as we have been able to find out, however, it looks as though both our government and the woodworking industry of Canada have been neglecting this opportunity, and the situation is difficult to explain.

Reduced Output Now Certain

As the logging season advances it is becoming more and more evident that operations in the woods this year will be on a smaller scale even than those of last year, and that, unless something unforeseen occurs, the reduction will be of sufficient extent to become an important factor in next year's market conditions. A large number of letters which have been received by the Canada Lumberman, many of which have been published in recent issues, point to this conclusion. Usually by this time of year the woods operations have been well started, and sufficient progress has been made to enable the operators to know fairly definitely what their output will be during the winter and how much it is likely to cost. This year the situation is still indefinite. Operators are unable to foresee how much they will take out of the woods or how much it will cost. Nothing whatever seems to be certain as yet, except that operating costs will be exceptionally high and labor scarce and inefficient. Many operators report that they are far behind in their woods work and that the present indications are that they will not be able to catch up. This means a reduction in output, which is variously estimated at from 25 to 75 per cent., many of the reports received placing it at 50 per cent. at least.

The labor situation seems to be the chief factor in this widespread

reduction of operations. Of course, the increased cost of supplies is also important, but this is something which the manufacturers can fairly well estimate in advance; and, in spite of the high cost of supplies, they have, in most cases, decided to operate as extensively as possible. The labor shortage, however, is an altogether different matter; it may go from bad to worse, and there are many operators who fear that it will do so, thus greatly crippling their efforts to take out a sufficient quantity of logs. Such labor as is available to-day is far below the average of the past few years in efficiency, and would be considered expensive even at normal rates of wages. The high wages which must be paid to-day render it extremely costly, and when this is taken into consideration in connection with its uncertainty, the situation can be appreciated by anyone who knows the importance of getting steady crews which can be counted upon to remain in the woods throughout the winter and to produce a good quantity of logs.

There never has been such a labor situation in the woods as that which prevails to-day, and the outlook with the Military Service Act in force, is for still greater disturbance. In numerous cases the only reason why manufacturers are keeping such crews in the woods as they can obtain is their desire to keep intact their producing and manufacturing organizations. A letter received recently from a large manufacturer in Ontario puts the situation clearly. He says:

"Briefly, the conditions may be stated as: Labor, 30 to 50 per cent. short of requirements, and what we have away below the average in efficiency; wages abnormally high.

"We are not able to get our camps filled, and men are so restless that they are going about as fast as we can bring them in. Within the past week the situation seems to be a little better, and we are getting more men and keeping them, but whether this is temporary or not we do not know. The carrying out of the provisions of the Military Service Act is bound to create some disturbance, the extent of which time alone will tell. We realize, as never before, our impotence and how completely we are creatures of circumstances. We think the majority of manufacturers take the same position as we do—that if they could keep out of the woods without destroying their producing and manufacturing organization they would prefer to do so.

"The certainties of PRESENT operating costs and the uncertainties of what they WILL be makes the net results very doubtful, even on the basis of present advanced selling prices. We can only hope that selling prices will advance in proportion to increased costs.

"There is no doubt but what there will be a substantial shortage in the log crop, but what it will be no one knows at present."

Is This a Penny-Wise Policy?

It has been a common thing of late years to hear the forest management of British Columbia referred to as the most modern and enlightened system of its kind in operation in North America. Certainly it is one of the best conceived systems of its kind, and has been producing very satisfactory results. One of its chief merits is the fact that it has been worked out under the co-operation of the lumber industry and the government, who are working together harmoniously in carrying out its provisions and promoting the welfare of the lumber industry and trade. It is difficult, under such circumstances, to understand the step taken by the British Columbia Government in closing the lumber commissioner's office at Toronto, which for a couple of years had been carrying on an active campaign for the increased use of British Columbia lumber products in Eastern Canada. Unquestionably this office was responsible for a great increase in the use of British Columbia products in the East, and it had just managed to get its work well planned out and running smoothly when, for reasons of economy, it was closed by the government and the commissioner was withdrawn. No one expects this step to be permanent, but there are many in Eastern Canada who are convinced that it was a great mistake to close the office even during the balance of the war.

The matter is open to argument, and resolves itself plainly into the balancing of the considerations of economy against those of practical value and protection of expenditure already made. No lumberman with whom we have discussed the matter has hesitated to characterize the closing of the office as a mistake. A great deal of valuable work which had been done, and which was largely of a missionary nature, was beginning to produce good results, and this work must now go practically for naught. When the office is opened again the missionary work will have to be repeated.

It is not possible to estimate the results of this work in cold cash and balance them against the expense of maintenance, but there is no question in the minds of those who take an interest in the matter that this office was a profitable one. It was unquestionably producing revenue by increasing business for the lumber industry of British Columbia, and this increased business was surely producing increased profits sufficient to more than offset the expense of keeping up the office. If this was being done during war times, the office could be counted upon to produce still greater results under normal business conditions, and it would have paid to keep it open, even at a loss, in order to be prepared for the business that will come later on. By stopping the work the field has been left open for competing products, which will not lose any opportunity of improving their trade, and the competition will, therefore, be all the more keen when British Columbia opens its Eastern office.

It is not possible for the Forest Service of British Columbia to carry on any effective long-range siege of the Eastern market. It is peculiarly one of those situations which necessitates face-to-face operations. The general wish of the Eastern trade is that the Government of British Columbia may see its way clear to open the office again without delay. It is a mistake to do anything of this nature spasmodically. The office was a publicity venture pure and simple. Half-hearted publicity is generally worse than none at all. In fact, the man who conducts a publicity campaign more vigorously during dull times than during times of trade activity is commended by advertising experts.

Not only has the closing of this office been something of a blow to those who were building their hopes upon an increased demand for British Columbia lumber products in the East, but it is making the handling of British Columbia trade more difficult. Without a nearby source of information regarding grades, qualities, stocks, etc., of British Columbia lumber and timber, the dealer in the East, and the consumer as well, are handicapped. It would be easy to quote many instances of how this works out. One will be sufficient to illustrate the point. A man who is to-day erecting a high-class residence found that the architects whom he approached were not well acquainted with the qualities of different woods for flooring, trim, etc. He wanted to obtain information as to the comparative merits of British Columbia fir and the different hardwoods that might be used. Had the British Columbia office in Toronto been open he could have secured this information readily. He had recourse to correspondence, writing for samples of British Columbia woods, which he would have placed before his architects. He has reason to believe that his enquiry was laid before the British Columbia Forest Service in Victoria, and, although the enquiry was made a month and a half ago, he has not received any information, and we know that hardwoods will now be specified for this house. It may be that his enquiry did not reach the British Columbia Forest Service without some delay and that the information and samples will soon be received, but it will then be too late. The presence of a lumber commissioners' office in Toronto would have resulted in British Columbia products getting an even chance on this business.

Clearly this is a proof that the British Columbia trade in the East is losing its hold because of the absence of such an office. It may be that the government and the industry in British Columbia look upon the Eastern market to-day with indifference, and consider it only as a periodical outlet for times when they find their regular markets on the prairies, in the United States and overseas, comparatively dull. Perhaps this is the real reason for the closing of the Eastern office. If it

is, we believe that the mistake is even greater than it appears to be, for there is an ever-increasing market in the East, one which would repay and effort to become well established in it, and one which will not welcome being treated as a trade safety valve, to be worked energetically only when there is not sufficient demand elsewhere, and to be neglected when the prairie and other markets are active.

New Brunswick Timberland Management

Although the Province of New Brunswick has granted outright to private individuals and companies the ownership of a larger proportion of its crown lands than any of the other provinces of Canada, there still remains under the management of the crown 7,500,000 acres, most of which is now under license, averaging as good timber contents as are to be found in the province. In one year the sum of $15,000,000 is distributed in New Brunswick from lumber and pulp products, while another million dollars' worth of wood is used by settlers for fuel and building materials. The government of the province obtains over $500,000 a year from the various crown timber taxes, and this sum will be materially increased by the recent rearrangement of the dues on crown timber.

These facts explain why the government of the province recently found it advisable to commence a forest survey and land classification, a work which has been under way for about a year and a half, and has now covered more than 550,000 acres out of the total of 7,500,000 acres of crown lands. The information which has been obtained by this survey, so far as it has gone, has been valuable, and has done something to stir the government of the province out of the lethargy which has prevailed in the past. As a result, it is probable that in the near future the forest policy of the province will be of a much more enlightened nature than it has formerly been.

It is only necessary to take a glance at the history of the lumbering industry of New Brunswick to learn how the neglectful methods of the past have been a source of loss. In the year 1825 New Brunswick exported 400,000 tons of white pine to England. This timber, which was once the standard species in New Brunswick, represents to-day not more than 5 or 6 per cent. of the total lumber cut of the province. Hemlock, which was valued a few years ago only for its bark, now brings $8 to $10 per thousand feet rafted at the booms. Spruce was regarded in New Brunswick almost as a weed tree within the memory of lumber operators now living, but sells to-day at a high price. The spruce log has, in fact, become the standard in New Brunswick woods operations.

As a rule, the history of a New Brunswick timber limit has been along the following lines: First, it was worked for the choicest pine. This was followed by a second and a third culling of pine, which left relatively little of that valuable timber behind. Next the operator took out the largest spruce of saw timber size, cuting at each return what previously would have been passed over. Finally the market for pulpwood made it worth his while to take out the spruce and balsam down to the smallest legal limit. Obviously the timber limit was being stripped not only of its natural increment, but of most of its capital stock. In the case of pine, the larger part of the capital is gone. As consequence of the severe culling of coniferous species has been to encourage the growth of hardwoods of a much inferior value.

In a general way, these facts have been pretty well known to governments and timber operators for many years, but it seemed to be nobody's business to look for a remedy. The information which is now being obtained by the forest survey and the example set by some of the other provinces of Canada indicate that this negligence may be expected to be superceded by a scientific and thorough system of forest management in the near future. What such a system will involve must be for the government to decide, but the experience of other provinces should be used as a guide, particularly in the matters of fire prevention and regulation of cutting operations.

Fires have taken a great toll of timber value in New Brunswick. There has never been in that province an adequate system of forest fire protection. The system as it has existed for some years includes the appointment of a chief fire warden, with fifteen county wardens, who are in charge of a varied number of deputies. By this system 160 men, on an average, are on the government pay-roll as permenant fire wardens. The fire wardens receive varied remuneration, some $2 a day, some $250 to $300 a year. Some county wardens receive up to $900 a year. Last year the average pay received per man was about $52. For such ridiculous pay no man can be expected to give service of any value. British Columbia this year is paying its forest rangers $100 a month for a six months' period. Ontario pays a minimum of $75 a month. Quebec pays an average of $60 a month.

These facts are vigorously outlined and discussed in a booklet published by Robson Black, secretary of the Canadian Forestry Association, which contains a strong argument in favor of bringing New Brunswick's forest fire protection system and its crown lands management up to date. Other parts of Canada, he points out, have built up forest guarding systems which completely outstrip in actual results the methods that preceded them, and there is no reason why the same thing should not be done by New Brunswick. A reform of this nature, together with the adoption of efficient methods of supervising cutting operations and timber scaling, all controlled from one department of the government, would put New Brunswick in a position where its people would know that its timber was being cut and marketed to the best possible advantage. Without vigorous administration of its timber lands there is nothing more certain than that within a comparatively few years the history of the destruction of the pine timber of the province will have been repeated in connection with the spruce, and the value of such timber as remains will be a mere fraction of the value that it is still possible to make the forests of the province produce in perpetuity.

Dominion Forestry Appointments to be on Merit

The announcement of the abolition of patronage in the Civil Service, contained in a statement recently issued by the new union government, is considered by Mr. Robson Black, secretary of the Canadian Forestry Association, to be a "Godsend" to the Forestry Branch of the Department of the Interior. It is specially applicable to the three prairie provinces—Manitoba, Alberta, and Saskatchewan. From the announcement Mr. Black believes that in future appointments are to be on merit, as against the old system of political influence or patronage. In the past, he states, the efficiency of the Forestry Branch has been more or less hampered by appointments made under the patronage system. This, he thinks, applies particularly to the appointment of fire rangers and others who have to do with the guarding of the forest tracts of the three provinces mentioned.

Just what system will be employed in making the appointments the Canada Lumberman cannot yet learn, but it is stated at Ottawa that the system in use by the Government of British Columbia may be partly copied. Under the patronage system a man without any woods knowledge, but with sufficient political influence, might secure a fire ranger's position though he had few qualifications for the work. Under the system followed by the Forestry Branch of the Government of British Columbia a man must possess certain woods qualifications before he gets a position. He must pass an examination, but he does not need to be a scholar. His chances of passing the examination are based on his efficiency and knowledge of woods conditions and the best methods of protecting them in the event of an emergency. About 60 per cent. of the marks on examination is allowed for experience. Twenty per cent. is for oral examination and the remaining 20 per cent. for written exercises.

Toronto Dealers Visit New York State

Retailers Entertained by the Trade at Rochester and Syracuse—Inspect Local Yards and See the Sights—An Enjoyable Two Days' Trip

The retail lumber dealers of Toronto paid a visit on October 19 and 20 to the dealers of Rochester and Syracuse, N.Y. This was the second trip that the Toronto trade have taken during the present year. They enjoyed themselves so thoroughly on their visit to Detroit and Windsor in the month of May that when a proposal was made to visit Rochester and Syracuse there was a unanimous vote in its favor. The party travelled to Rochester on Thursday, October 18, most of them taking the train and a few going over by motor car. On Friday the party mustered fourteen, and was made up as follows: J. B. Reid, W. J. Smith, W. C. Laidlaw, G. W. Boake, W. C. Irvin, T. A. Paterson, Alan Watt, F. A. Bowden, F. G. Bowden, W. B. Tennant, A. Rhind, J R. Chelew, Chris. Hillock, and H. Boultbee of the Canada Lumberman.

Weather conditions on Friday were unfavorable, and interfered with a number of visits which had been arranged. It was intended that the party should visit some of the retail yards in Rochester and be shown over the plants of the American Woodworking Machinery Company and the Eastman Kodak Company. In the morning the American Woodworking Machinery Company took charge of the visitors, and conveyed them in motor cars to their interesting and extensive plant. Once inside this plant the visitors found so much to interest them that they were unable to tear themselves away until the morning was so far advanced that further visits were not possible. At 1 p.m. the members were entertained at luncheon, and there were present a number of Rochester retailers and Mr. Paul S. Collier, secretary of the New York State Retail Lumber Dealers' Association. The luncheon was of an informal nature and was followed by a few addresses.

Retail Association Work in New York State

Mr. J. A. Detweiler, of the Spencer Lumber Company, Rochester, N.Y., occupied the chair. The first speaker on whom he called was Mr. Paul S. Collier, secretary of the New York State Retail Lumber Dealers' Association, who gave an outline of the progress of association work in New York State. One of the great advantages of co-operation, he said, was that it enabled the dealers to deal with the railways in a much more effective manner than they could individually. The association had been instrumental in getting shipments traced or speeded up in a large number of cases, and their influence was of much importance in the settlement of disputes or claims with the railway companies.

Mr. Collier spoke also at some length of the importance of systematic cost accounting. This matter had been taken up by the New York State Association in earnest, and he believed that their association was the first of its kind to go systematically into the scientific study of costs. They had decided to make a considerable outlay for this work, and were already satisfied that the results would justify it. Arrangements had been made with a firm of expert industrial specialists to study all the details of this problem, with special reference to the New York State yards. When this study has been completed the best possible cost accounting system will be installed in the yards of the members, thus furnishing them with the means of knowing their costs definitely and comparing them with those of the other yards.

Group of Toronto Retail Lumbermen on a Visit to Syracuse, N.Y.

The whole object of the association, Mr. Collier said, was to give service to its members. To do this it was necessary that it should have the fullest co-operation of its members, and that the members should use its facilities as extensively as possible. Only in this way could association work be successful. Unless the individual members took a definite and enthusiastic interest in it, the association would not be able to accomplish anything of importance. When a member took such an interest he was certain to benefit both the association and himself. It was a mistaken idea to imagine that one could join such an association simply by paying a fee and then sit back and receive the benefits of co-operation. A member could only get out of his association what he put into it. If he simply paid a fee he would get practically nothing, but if he tried to promote the interests of the association he would find that his own interests were promoted to an equal or even a much greater extent. The retail lumber trade to-day were just beginning to learn the elements and the language of co-operation. They were learning that it meant doing definite things, going after definite subjects, and trying to produce definite results. One of its happiest and most important results was the establishment of greater confidence among the individual members of the trade. When the New York State Association was commenced many of the small groups of dealers were lukewarm or even adverse to its plans, asserting that it was impossible to get the members of the trade together. This had all been changed. The retailers were now working together enthusiastically and the association was getting along beautifully.

Mr. H. Boultbee was then called upon, and described the workings of the Toronto Lumbermen's Credit Bureau.

Mr. W. J. Smith, Toronto, spoke briefly in a reminiscent strain.

Mr. C. C. Beehan, second vice-president of the Rochester Chamber of Commerce, extended a welcome to the visitors, and spoke of the work of the chamber.

Toronto's Association Experience

Mr. J. B. Reid, Toronto, the next speaker, told of some of the progress made in association work in Toronto. The lumbermen of Toronto, he said, had accomplished wonders during the past two years. They had started out with probably the worst lot of lumber dealers that ever were gathered together. Some of them had been doing business for thirty years in opposite ends of the city and thought one another the meanest men in the world, but when they were brought face to face they soon saw their mistakes and were ready to join hands in promoting the welfare of the trade.

The social side of the retail lumber business, Mr. Reid said, had been neglected in the past. Since the association idea had been introduced, however, the biggest firms in the city had come in, and were co-operating in a social and a business way. This might all have been done just as well thirty years ago and have made life better for them during all the years when they had been running one another down and cutting prices.

Before the dealers had learned how to co-operate in Toronto very few of them had known anything about how to conduct their business safely. They had paid more attention to price-cutting than to getting a profit. They figured that 50c would put a stock of lumber into their yards from the car and 50c would put it out again, and then if they got a dollar for the boss they thought they were all right. If it had not been for the profits made on land upon which they had squatted years ago not one of them would be in business to-day. During the past two years, since they had been co-operating, all these evils had been eradicated, and the retailers had been educated until they all appreciated the fact that 25 per cent. upon the cost was the least margin upon which business could be conducted safely.

The retailers of Toronto could take credit not only for what they had accomplished among themselves, but for the example they had set to the other branches of the trade. The wholesalers were now following the lead given by the retailers. It seemed a strange state of affairs, but was actually the case, that the retailers in Toronto were teaching the wholesalers how to co-operate. The wholesalers were now working out plans for a credit bureau, to protect them against bad accounts, and they were proposing to start monthly dinners similar to those which the retailers had been holding for a couple of years.

In conclusion, Mr. Reid spoke vigorously in favor of adopting and developing the association idea wherever possible. "If we leave our children the heritage of a cleaned-up lumber business, that can be run like an honest man's business, without any suspicions, clean and above board in all regards, we will have left them something better than money can buy; and I think that the Toronto retailers have made a great step in this direction. We have elevated the contractors in

Toronto by means of the credit bureau. We have made the contractors our friends. We have eliminated the dead beats from the business, have made the good contractors who are willing to pay the list price our friends, and have established them so that they can do an honest business themselves."

Co-operation's Many Aspects

Mr. H. R. Isherwood, manager of the Retail Department of the National Lumber Manufacturers' Association of the United States, was the last speaker. Co-operation was the keynote of his address. He could plainly see, he said, that the success of the retail association in Toronto was due to the confidence the members of the trade had gained in one another. This confidence would bring success to every one of them. Not only that, but the energy and efforts they had spent in the past in developing the selling end of their business had been exerted under very difficult conditions when they were not organized. When each firm was struggling against all the others there was bound to be a great deal of wasted effort. By adopting the methods of organization they not only did away with all this waste, but made business more pleasant, more friendly, and, most important of all, more profitable. The association idea was making great progress to-day. He believed that every town, city, state, and province in North America was working more or less towards this ideal. The result was that they now had many organizations, of a local, state, provincial, and national nature, and all of these associations were more or less related to one another. It was impossible for any of them to live without the others. Each organization was deserving of the support of every one for whom it worked.

In promoting the association idea among retailers one of the most difficult problems they had to deal with was the great variety of conditions prevailing in different localities. There was one very important subject, however, which could be advantageously taken up in practically any locality, namely, the subject of cost accounting. A short time ago he had been in a city in the West where there were eleven retail lumber dealers, and no organization. He visited each of the dealers and asked them how much it cost them to do business. In eight of these offices they told him that the cost was anywhere from 16 to 20 per cent. In three of the offices he was told that it ran from 9 to 12 per cent. It was scarcely necessary for him to add that the three dealers who did their business on a basis of from 9 to 12 per cent. were the cause of all the trouble in that city. They not only made trouble for themselves, but for the eight other dealers, and they had created an ill-feeling even between those eight. These eleven dealers were brought together in the evening, with the object of putting the three who were the cause of the trouble on the right track. They all met at a little dinner, and Mr. Isherwood asked each of them, in the presence of all the others, how much it cost them to do business. They naturally gave him the same figures as they had given him in the afternoon.

It was found that one of the three men owned his real estate, which was worth $10,000, and made no charge for it against the business. Further, he had a son and a daughter working in the office and gave them no salaries; simply let them have plenty to eat and wear and a little spending money. After the other dealers had got through with these three dealers, the latter put their cost of doing business up to 15, 17, and 17½ per cent. The result of the meeting was that all these dealers got to know one another fairly well, and the foundation was laid for a successful organization.

Why the Substitutes Have Succeeded

Mr. Isherwood then dealt with some of the work of the retail department of the National Lumber Manufacturers' Association. Fifty per cent. of the entire production of lumber manufacturers, he said, passed through the hands of retailers. Over 75 per cent. of the lumber sold to the consuming public in the United States was not sold; it was bought. The American public to-day knew less about the products handled by the retail lumbermen as to grades, species, kinds, and the units of measurement and cost than they knew about any other commodity on the market. The materials competing with lumber, known as substitutes, had all come into the field as new products, backed up by new ideas which had been thoroughly studied. The producers of these substitutes lost no opportunity of pointing out the advantages claimed for them over the products handled by the retail lumbermen for so many years. These points were thoroughly explained to the lumbermen themselves, until they, in many cases, decided to handle the substitutes. In this way the producers of substitute materials were taking advantage of the facilities which the lumbermen had provided for selling and handling their lumber product, and in which a great amount of their capital had been invested. The retail lumberman, moreover, as a natural result, handled these new products along the lines suggested by the manufacturers who sold them. They put modern selling methods into the handling of this stock and found that, under such conditions, it could be sold successfully in competition with their legitimate lumber stocks. This was not because the new product was any better than the lumber, but because the retailer understood that product and how to sell it better than he understood the lumber. If they would just adopt the same attitude towards their lumber-selling business, treating it as though it were a new product, and selling it in a modern manner, they would find that it would sell just as well as the substitutes.

The Dealer or the Contractor?

The National Lumber Manufacturers' Association was ready to assist retailers in adopting modern selling methods. There was no subject connected with the selling of lumber upon which it was not prepared to furnish information. In fact, it had come to the conclusion that the methods of selling lumber by retail must be changed and had decided to do all it could to bring about this change. The old method of buying lumber was for the home-builder to come to the retail yard and ask for a price. When the retailer had told him the price per thousand feet, he knew, in fact, less than he knew before. The result was that he would go back home dissatisfied, because he had not obtained the information he wanted. What he was interested in was the price of the home. To get this he would have to go to the local contractor. The contractor would probably apply the retailer's prices to a list of material and give the home-builder a price on the complete home.

The point that it was important to bear in mind in these cases was that the contractor was giving information which ought to be given by the lumber dealer. What position did this place the lumber dealer in? He became the stock-keeper and the financier, while the contractor became the seller and the man who made up the dealer's specification and told him what he could furnish. The position should be reversed. The lumber dealer should be the one who was closest to the consuming public. It was not necessary for the dealer to break away from the contractor. He ought to co-operate with the contractor, take him into his confidence, talk over the various materials to be used, and educate him as to the advantages of the materials carried in the lumber yard. In short, the lumber dealer ought to become the building authority of the community.

Building Plan Service

Mr. Isherwood then referred at some length to the subject of plan service. He had noticed in the East that plan services were not used to any great extent. In the Middle West and the West over 70 per cent. of the retailers were using them. A large number of organizations had been formed for furnishing plan service. They had spent a great deal of money in organizing for the purpose, and it was important that the retailers should recognize some one service which recommended itself to them. He did not think that any of the plan services adopted in the West were exactly suitable for the East. Therefore, the Eastern trade should take this matter up and work out a system that would be suitable to their own requirements. The one thing of great importance was that some such system should be adopted. The systems that were now on the market would be offered to the contractors if the dealers did not furnish something equally good or adopt some of the systems now existing. If a contractor got one of these plan services ahead of the retailers he would be able to make life more miserable for them than it had ever been before; but if the retailers were first in the field, the contractors would never enter it at all.

Mr. Isherwood dealt next with the importance of establishing a service department in connection with a retail lumber business. He had done this in his own business and had found it the greatest possible aid in securing customers. He had furnished plans free to the public of every kind of building that they wanted, and, although his company covered a territory eighty miles in length and operated four yards, there had just been one single building in eight years that they lost, after furnishing an estimate upon the bill. His company had not advertised the products they carried in their yards. They had only advertised their services. Having the yard and office properly furnished with service facilities brought the people to them for their materials. The people put questions to him of every conceivable description, and the result was that by the end of a year he had consulted so many circulars, explained so many samples, and looked up so many reference books and plan books that he had thoroughly educated himself on every product handled by his company. This education had been a great help in his business, because it was necessary to have a proper knowledge of one's product before it could be handled with complete success. Information gained in this way enabled a dealer to make up his estimates, offer suggestions as to kinds of materials, and solve many difficult building problems, thus putting him in the closest possible touch with the consuming public and with the contractors, and enabling him to specify the lines he carried in stock, and which he knew were best for the consumers' requirements.

Arrangement of the Retailer's Office

Another matter of much importance was the arrangement of the retail lumber dealer's office and the way in which it was kept up. Sixty per cent. of the buying power in any community was controlled by the

women. How many dealers' offices were kept in such a condition that they felt perfectly free at any time to receive the ladies? One of the most important things in a retail office to-day was its sanitary condition. If an office was kept clean and neat, and ladies were invited to come into it at any time, it would obtain a reputation that would mean a considerable increase in its business. The old practice was that if a visitor came to town and had to visit the lumber yard, he sent his wife up town while he went for the lumber himself. He did not seem to think that a lumber yard was a fit place to which to take his wife. So the wife went to some other business place, and, while she was waiting, would look around the store to see what she could buy. The power that ladies brought to bear upon the head of the house was the deciding influence in connection with nearly all purchases. Therefore, it was important for them to get their offices in such a condition that they could extend an invitation to the ladies to visit them at any time. Some dealers had an idea that this did not apply to small towns, but he had carried it out successfully in a town of 200 people, and his competitors had been obliged to adopt the same idea.

Any retailer who was contemplating alterations to his office or intended to put up a new office could obtain from the National Lumber Manufacturers' Association much useful help. If he would send them a rough drawing of the present office equipment and arrangement the association would furnish him with anywhere from one to three suggestive blue prints showing how to bring the office up to what they considered to be a standard office and giving reasons in every instance for the arrangement and equipment suggested.

Mr. Isherwood then dealt with the appearance of an office from the customer's point of view, saying that in many cases the customer found himself confronted by a long desk, wire railing, and other obstructions which prevented him from getting into personal contact with the manager. If he had a purchase in mind, or intended to settle an account, these obstructions made it just that much more difficult. There should, at least, be a portion of the desk standing at a level over which the manager could meet the customer face to face. Without any obstruction between them a dealer could carry on his business with a customer more satisfactorily and close a transaction more easily and quickly.

The subject of advertising was one of great importance to retailers. The lumber dealer ought to advertise along modern lines, and give his local paper full consideration. He believed that aggressive advertising and modern selling methods, including such plans as putting on a "Build a Home" campaign, would go a long way towards improving the slack business conditions that now prevailed. The National Lumber Manufacturers' Association was assisting in putting on campaigns of this nature, and it had also prepared a large number of publications for farmers, architects, manual training schools, etc., covering every kind of building that could be constructed of materials handled by lumber dealers. These publications were obtainable at the cost price.

In conclusion, Mr. Isherwood stated that he had had considerable correspondence with dealers in Canada, and that his association, although its membership did not extend to Canada, was prepared to furnish its publications, samples, etc., to Canadian dealers, the same as to those in the States.

At the conclusion of the meeting Mr. J. B. Reid moved a vote of thanks to Mr. Collier and the retail lumber dealers of Rochester for the very pleasant reception they had extended to the Toronto visitors.

After luncheon the Toronto lumbermen were escorted to the Chamber of Commerce by Mr. C. C. Beehan, second vice-president of the chamber, and were shown through it, and entertained by the secretary and several of the members.

A visit was then paid to the Rochester Club, where Mr. Fletcher and Mr. Johnston acted as hosts, and entertained the visitors until it was time for them to return to their hotel.

At 8.20 the party left for Syracuse, N.Y., where they were entertained on Saturday morning.

The Syracuse Visit

The Syracuse programme commenced with a visit to the lumber yard of the firm of Mann & Hunter. The visitors were shown through the office and yard, and were greatly impressed by the excellent appointments and arrangements which they saw. This company carries a very extensive stock, which is all under cover, with the exception of the rough stock. It would be difficult to name any retail lumber yard which can excel that of Mann & Hunter for neatness, systematic arrangement, thoroughness, and all the other elements that enter into the successful conduct of a large retail lumber business.

After visiting this yard the Toronto dealers proceeded to the plant of the Franklin Motor Car Company, and were shown the process of manufacture of this excellent car. Every detail of the work was seen, from the assembling of the chassis to the testing of the finished car upon the neighboring hills.

The visitors were then taken in automobiles to the University of Syracuse, shown through some of its splendid buildings, and given an opportunity of admiring its large concrete stadium, which is capable of seating 37,000 people, and surrounds a full-sized football field.

The visitors then returned to their hotel, where they were entertained at luncheon by the Syracuse dealers. Mr. William A. Parkinson, of the firm of Mann & Hunter, occupied the chair. Addresses were delivered by Messrs. Robert B. Chapman, J. B. Reid, and H. Boultbee.

Mr. Chapman spoke enthusiastically of the value of co-operation among retail lumbermen, and told of the great benefits which the Syracuse trade had obtained from it. Mr. Reid delivered a similar address relating to the situation in Toronto. Mr. Boultbee told of the working of the Toronto Lumbermen's Credit Bureau and of the way in which it had enabled the Toronto trade to eliminate many of its former sources of loss.

After luncheon the visitors from Toronto boarded the train for the return journey, and reached Toronto at 9.30 on Saturday night. They had all enjoyed themselves so thoroughly that they discussed, during the journey home, the advisability of taking another trip in the near future.

Ottawa Retailers Organizing

A meeting of retail lumber dealers in Eastern Ontario was held at Ottawa on October 24, and organization arrangements were completed in connection with the representation of the Eastern district in the general Ontario Retail Lumber Association, for which an organization meeting will be held early in November. The visitors from outside points were entertained at a luncheon by the Ottawa Lumbermen's Credit Bureau. The proposed organization plan was discussed and approved, and the following committee was appointed to represent the Eastern district at the general organization meeting: E. M. Barrett, Ottawa, chairman; G. P. Davidson, Ottawa; George M. Mason, Ottawa; C. H. Walters, Ottawa; F. R. Anglin, Kingston; F. S. Macfarlane, Montreal; J. E. Lowey, Brockville; D. Carkner, Kenmore; W. A. Cheney Vankleek Hill, and C. R. Robertson, Ottawa.

Northern Ontario Retailers Organizing

A meeting of retail lumber dealers of Northern Ontario was held at Sudbury, Ont., on October 20 in connection with the proposal for the formation of an Ontario retail lumber association, with five local organizations in the different parts of the province. An organization of the Northern dealers was effected, the following officers being appointed: Howard Hessom, of W. J. Hessom & Son, Sault Ste. Marie, president; J. A. Laberge, Sudbury, secretary; Henry Knight, Burk's Falls; A. J. Young, North Bay, and Mr. McKinnon, of Knight Brothers & McKinnon, Cobalt, vice-presidents. These officers will represent the Northern association at the general organization meeting, which will be held early in November.

Toronto Wholesalers Planning to Organize

The Lumbermen's Section of the Toronto Board of Trade held a meeting on October 26 and inaugurated a move for developing more effective co-operation among the wholesalers of the city. There was a large attendance at the meeting, and a plan suggested by Mr. H. J. Terry was thoroughly discussed. At a previous meeting this plan had been approved in principle and left for fuller discussion at a subsequent meeting. Mr. Terry proposed that the wholesalers of Toronto, including the manufacturers doing a carload trade, should organize themselves, either as a branch of the section or otherwise, and hold monthly meetings, in the evening, following a dinner. This plan had already been adopted by the retailers of Toronto, and had worked out well. It would then be possible for the wholesalers and the retailers to hold their separate monthly meetings and to have meetings of the general section less frequently than at present, possibly once a month instead of once a week. This would make it possible for each branch of the trade to concentrate its attention upon its own particular problems, and for both of them to exert their influence in concert in connection with any matters of mutual interest.

The subject was discussed by all the members present, and the proposal met with everyone's approval. A committee was appointed, consisting of A. E. Clark (chairman), H. J. Terry, C. W. Wilkinson, A. E. Eckardt, and J. L. Campbell, to take the necessary steps towards getting the plan in operation.

The committee held a meeting on October 29, and arranged to hold a dinner of those engaged in the wholesale lumber trade on Friday, November 16, at 6 o'clock. It is probable that the dinner will be held in the Albany Club. Mr. A. E. Clark, chairman of the committee, will preside, and after the dinner the proposal to organize will be discussed in detail.

Dr. John Bates, superintendent of the Forests Products Laboratories of Canada, Montreal, has been appointed a member of a subcommittee on chemistry, appointed by the Advisory Council for Scientific and Industrial Research, Ottawa.

New Brunswick's New Timber Regulations

The Government of New Brunswick's order-in-council changing the stumpage rate charged for timber cut from crown lands and making the new rates effective from August 1, 1917, contains the following schedule:

For spruce, pine, and hackmatack sawlogs, per 1,000 superficial feet, $2.50; hardwood timber up to an average of 14 inches, per ton, $1.10; hardwood timber up to an average of 14 inches, per ton, $1.10; hardwood timber above 14 inches, additional per inch, per ton, 10 cents; hardwood logs, per 1,000 superficial feet, $1.25; pine timber up to 14 inches square, per ton, $2; pine timber above 14 inches, additional per inch, per ton, 50 cents; hackmatack timber, per ton, $1; spruce timber, per ton, $1.50; cedar logs, per 1,000 superficial feet, $2.50; railway ties, 8 feet length, each, 12 cents; hemlock logs, per 1,000 superficial feet, including bark, $2; white birch for spool wood, per cord, 65 cents; white birch logs for spool wood, per 1,000 superficial feet, $1.25; fir logs, per 1,000 superficial feet, $2; poplar logs, per 1,000 superficial feet, $2; and for all other descriptions of lumber not specified above, 15 per cent. of the market value thereof at the mill, place of shipment, or place of consumption in the province. Permits issued by the authority of the Minister of Lands and Mines to enable licensees to cut undersized lumber on barren lands or thickets will pay the same rate of stumpage as stated above, with the addition of 25 cents per 1,000, being the cost of supervision.

Toronto Wholesaler's Sudden Death

News of the sudden death of Mr. E. P. Sharp, of the Sharp Lumber Company, Toronto, on October 18, was a great shock to his many friends. Mr. Sharp's health had been poor for some weeks, and death resulted from apoplexy. The late Mr. Sharp had only been in the lumber business for about four years, but was widely known on account of his former business relations with many lumber firms in the capacity of an insurance broker, specializing in employers' liability and lumber insurance. He left this to become a member of the staff of Terry & Gordon, Toronto, as a salesman, and remained with them for about two years. He then became a member of the firm of Muir, Kirkpatrick & Sharp, Toronto, and, after a year with them, accepted a position as lumber purchasing agent with the firm of Bate & McMahon, contractors for the construction of Camps Borden, Leaside, and Mohawk. When this work was completed, Mr. Sharp opened an office in Toronto as a wholesale lumber dealer.

The late Mr. Sharp was 32 years of age, and is survived by his wife. At the time of his death he had completed arrangements for taking a rest in order to recuperate after the great strain of his work in connection with the construction of the military and aviation camps.

Car Service Situation Serious

The Special Railroad Conference Committee of the National Wholesale Lumber Dealers' Association of the United States report having received an important letter from the Commission on Car Service, Washington, D.C., in which the present car service situation and the outlook are outlined. The letter is, in part, as follows:

"Embargoes on shipments are the result of general congestion on particular lines, and, while conditions may be somewhat improved during the next few weeks, yet it is likely that when cold weather arrives, with its consequent slowing-down effect on the railroads, and with probable increased offerings of freight, the congestion may be of serious consequence.

"No one can actually forecast the extent to which the facilities of the transportation lines will be overburdened during the coming winter, but it is generally conceded that the increasing demands of the government will retard the handling of many classes of commercial freight.

"Embargoes and preferential orders will, of course, be based on the relative importance of commodities, and no doubt some classes of freight will be more or less delayed in movement. We cannot hope to eliminate these troubles, but the extent of minimization depends upon efforts of the carriers, plus detailed and individual efforts of freight shippers and receivers.

"One of the greatest factors in a condition of this kind is the prompt unloading of cars. It would surprise you to know the vast number of loaded cars held in various railroad yards and terminals waiting acceptance and unloading by consignees. Every car so held adds to the drain on facilities of the carriers. This commission, in conjunction with various sub-committees located throughout the country, is exerting every effort to reduce the accumulation of loads held for consignees, and asks the active co-operation of your committee of the National Wholesale Lumber Dealers' Association. If you will help us to control these accumulations the result will be equivalent to an extension in railroad facilities, and the benefit will be mutual."

The special committee, commenting upon this, say:

"It is quite evident from these advices that serious transportation difficulties will confront us, and it will be well for members to plan accordingly.

"We especially urge the necessity for full loading and prompt loading and unloading of cars."

England Expected to Increase Its Wood Consumption

Reports reaching the offices of the National Lumber Manufacturers' Association indicate that there will soon be an increase in the use of wood in England. When a timber controller was appointed last January as a war measure the consumption of wood was restricted in nearly every direction until an irreducible minimum seems to have been reached. During the past two years England has been living very largely upon its fixed capital, so far as wood is concerned, and little has been done to make repairs or erect new buildings. The railroad companies put off necessary work in the hope of better conditions, but this cannot be longer postponed. The construction of workmen's cottages must also go ahead, since many munition and other workers are homeless, while the great increase in shipbuilding and ship repairing is bringing an inevitable demand for more ship timber. At the same time the requirements of the British army for packing boxes and cases, furniture, light railways, aerodromes, and other buildings make a constant demand for lumber.

The conclusion of the English timber firms is, therefore, that the time has arrived when a larger timber consumption must take place, and that the government will act wisely if it allows a larger importation of foreign stocks.

Fifteen Per Cent. Rate Advance Case Re-opened in U.S.

The United States Interstate Commerce Commission has responded to the plea of Eastern railroads for financial relief by reopening the 15 per cent. rate advance case, so far as territory east of the Mississippi and north of the Ohio Rivers is concerned. The first hearing has been set for November 5 here.

In urging haste in the consideration of this case the commission opens the doors to the admission of testimony looking to a general advance in all rates east of the Mississippi and north of the Ohio Rivers. Railroads in the South and West have been showing a decrease in their earnings, and it seems, therefore, probable that the Southern and Western carriers will join in the request for an advance.

Lumberjacks Turned Back Near Border

A party of 27 lumberjacks, bound from Yarmouth, N.S., to a lumber camp in the State of Maine, were detained recently at St. John, N.B., by the immigration agent. Twenty-four of the party are between the ages of 20 and 45, and are being held under the Military Service Act. It is expected that those who are not liable for military service will be allowed to continue their journey. It is reported that the men are nearly all French-Canadians, who were hired by a representative of a lumber company of Jackman, Me., at Yarmouth, N.S.

B. C. Petitions for Shell Contracts

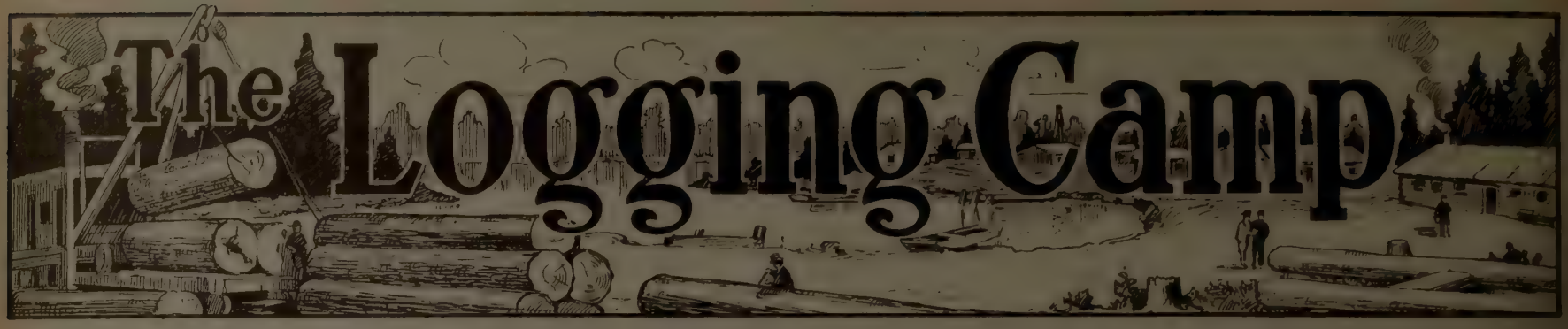
A petition has been forwarded to Sir Robert Borden by munition workers at Victoria, B.C., urging that further shell contracts be placed in British Columbia, on the ground that this kind of work should be provided for the dependents of those who have gone to the front and for returned soldiers. By the middle of November all shell contracts in the province will be completed, and about 2,000 men and women will be out of work unless new contracts are let.

Read Brothers, Limited, in New Quarters

Read Brothers, Ltd., wholesale lumber dealers, Toronto, whose office was in the Aberdeen Chambers, 43 Victoria Street, which was recently destroyed by fire, have secured new offices at 25 Toronto Street. Their new telephone number is Adelaide 870.

Mr. R. G. Chesbro, Traders Bank Bldg., Toronto, eastern representative of the Victoria Lumber and Manufacturing Co., Chemainus, B.C., who has been away from his office on account of ill-health during the past month, has returned to work, and his friends will be pleased to learn that his health is now greatly improved and that he expects to continue at his work without any further interruptions of this nature.

Capt. Gerald Davidson, cousin of Mr. Grant Davidson of the Estate James Davidson, Ottawa, Ont., has been promoted to the post of trench mortar officer of the Fourth Division. Capt. "Jerry" Davidson went overseas early in the war as a gunner. His promotion came quickly, first to the rank of lieutenant and later to that of captain.



Should the Cookhouse Show a Profit?

At the annual meeting of the Pacific Logging Congress, held recently at Seattle, Wash., a special committee presented a report upon the question, "should the cook-house show a profit?" The committee reported that the cook-house should show a profit, though very few had done so at any time, and practically none during the past year. Continuing, the report was as follows:—

With the great war, the I. W. W., the shipyard strike and numerous other questions of major importance to divert our attention, we trust that your committee may be pardoned if they have not given the cook-house the close investigation its contents warranted. There is some satisfaction in knowing that in the grievance list of the gentlemen who prolonged the Fourth of July vacation somewhat later than usual this season, there was little mention of poor food in the camps. Lack of whisky in the cities is said to have been a far more vital factor in extending the loggers' summer rest. Be this as it may, your committee is convinced by personal sampling of many menus that the general effect on the average logger is satisfactory, whatever the result to the owners' trial balance.

We had hoped to find several camps with well-settled menus of balanced rations with the calories duly set forth, but apparently modern methods of determining the value of a dinner have not been adopted, and we must refer anxious inquirers in this line to the domestic science department of the nearest high school. Conferences between the chef of a good two- or three-side logging camp and the instructor in domestic science or home economics, would probably disclose interesting differences of opinion. Fearing that your honorable body may think we are trying to dodge the question, we will now say that the cook-house should not make a profit. Very few have done so at any time. Practically none during the past year.

Logging is hard work and life in the open induces appetite. Camps generally are supplied much better than ten years ago with the best of meat, milk, vegetables, and with butter, eggs and fruit in generous quantity. At present food prices and board ranging from $6 to $7 per week, good management has been necessary to avoid actual loss. Here the personality of the cook counts for most, but the camp foreman or superintendent and the purchasing agent are important factors.

Every camp should have sufficient pigs to supply fresh pork as needed. No well-managed cook-house will fatten these pigs with the waste from the kitchen. It must be supplemented with cornmeal or other purchased feed, especially for a month before particular pigs are to be killed. This insures good pork without waste in the kitchen.

Many cooks err in placing too many varieties, especially of canned fruits and vegetables, on the table at the same time. It is far better to have a small number of dishes, well cooked, at a given meal with an entirely different menu next day for that meal, than to have appetite palled by a surplus without variety. The method suggested satisfies the men, lessens waste, and is easier for the cook-house force. Brains in the kitchen mean money in the office and satisfaction in the bunk-house.

A nominal profit on paper of $100 per month for a two-side camp is necessary to avoid actual loss. There is continual deterioration of utensils and dishes and the tendency is far too strong to charge replacement to camp equipment. The mattresses now supplied at most camps free, should be paid for by the cook-house. They require frequent renewal.

Twenty years ago the camp using anything but tin and iron tableware was a curiosity. Today it is difficult to find such ware in use. Granite and enameled ware are still common, but the best camps use heavy hotel stone china for table service and white metal forks and small spoons. Varnished fir tables, cafeteria style, are disputing the old white oilcloth in some camps.

Some camps serve hot soup and coffee with an otherwise cold lunch in temporary shelter at lunch time to outlying sides where it is difficult for the men to come in at noon and yet where the timber does not warrant establishing sleeping quarters and a regular camp. While this adds to the apparent cook-house cost, it increases the comfort and efficiency of the men and should mean a net gain for the company.

Some managers think it good policy to run the cook-house at a loss rather than charge sufficient to pay cost at times of high food prices. We believe the supposed offset of better men or possibly lower wages in such camps is a fallacy; $6.30 per week is the least that will suffice to pay all proper bills in a well-managed cook-house today. In many camps $7 is justified, though perhaps not advisable.

Our versatile secretary suggested to the committee so many ideas that if we reported fully this is the only subject the Congress could consider at this season.

As to rules preventing talking during meal hours, we know of no camp where such rule exists, or is necessary or advisable.

All modern camps have some room, warm and well lighted, where men may gather for recreation, reading and writing. Shower baths are installed in most camps and should be in all. There are few camp laundries. This work is usually done at the nearest town or by women near the camp. Most camps make no charge for mattresses or anything except board, hospital and personal clothing. The fewer special charges made the more contented the men.

It is not advisable that men should walk more than three-fourths of a mile from camp. If camp cannot move up let men be carried on train.

The following suggestion by Mr. Kenneth Ross deserves especial attention:

"We also think that the living conditions in the logging camps with reference to bedding, sanitary conditions, etc., should be standardized and strong committees of the various associations be appointed to see that whatever standardization is agreed upon should be strictly lived up to. I think in this way we would be able to eliminate a great deal of agitation that emanates from camps where little or no attention is paid to sanitation or living conditions of the men."

The above statement goes to the heart of much of the woodsmen's discontent.

The average cook will resent a menu directed from headquarters, but we believe there is a field for a camp cook-book with proposed menus covering two-week period, and to the production of such a work we commend the ambitious chef collaborating with the nearest home economics instructor. The task is beyond this committee. Meanwhile, until the book is forthcoming, the careful cook, the intelligent manager and the purchasing agent must consult frequently or the question will soon be not "Should the cook-house make a profit?" but "How can we reduce the loss?"

Steam Logging Methods in a Washington Camp

Logging operations carried on by the Danaher Lumber Company, near Darrington, Wash., are described in an interesting article by Fred H. Madigan, assistant engineer, in an article in the West Coast Lumberman. The operation consists of two camps. Camp No. 1, or headquarters, is located two miles north of Darrington, and will log all the holdings in Sections 6, 30, 31, and 36. This camp is equipped with two tree-rigged Lidgerwood skidders, each averaging about 3,000,000 feet of logs per month. The camp record made just before the July shut-down is 213,000 feet of logs yarded and loaded in ten hours by one of these skidders.

Camp No. 2 is located just east of Sauk Prairie. This is a one-side camp, equipped with a steel spar Lidgerwood skidder, and will log Sections 34 and 27. This camp was but recently opened, and has to date averaged about 2,000,000 feet per month.

Both camps are at present operating on ground that is practically level, and the timber averages close to 100,000 feet to the acre. In the spring both camps will be operating on steep side hills, in timber that averages 70,000 feet to the acre.

Two 80-ton Shay locomotives furnish the motive power, one being located in each camp. N. P. flats are used, empties being picked up and the loads delivered at the N. P. wye at Andron, one mile west of Darrington. This makes a two-mile haul from Camp No. 1 and six miles from Camp No. 2. The loads average 7,000 feet.

Will S. Taylor is superintendent, J. W. Martin is foreman of Camp No. 1 and Andrew Thompson is foreman of Camp No. 2. Joseph G. G. Morgan is chief engineer, with headquarters at Camp No. 1.

The first duty of the engineer is the planning of the setting ahead

of the yarding operation. For the tree-rigged skidders, the first consideraion is the selection of the spar-tree. The practice on the flat has been to split the forties, locating the spar-tree in the approximate centre, and logging the entire "40" from one setting. This gives a maximum yarding distance of about 1,000 feet. On the side hill the spar-trees will be close to 1,000 feet apart, thus bringing the maximum yarding distance down to about 800 feet.

The settings for the steel-spar skidder are between 800 and 1,000 feet apart, as the ground and timber conditions demand. The machine weighs 150 tons, so the setting must always be in a cut of two and one-half feet or better, to afford a solid foundation and prevent undue sinking. A short spur is run in parallel to the main line, and the skidder straddles the track on this spur. The cars are spotted behind the machine by the locomotive, and the empties are spotted beneath the skidder by the spotting gypsy and loaded in front. In this way the mainline is always kept clear, so that ties, ballast, steel, pile-driver, and any other material that may be needed in the "tall uncut" ahead can get by.

When locating the roads, the engineer curves only at the spar-trees, except where it is unavoidable, thus obviating the necessity of yarding across the track. When choosing spar-trees it is good practice to get them on alternate sides of the track. Where this is possible, the operator can fudge a little on the logs of the next setting, on the adjacent side of the track, and thus avoid the long, hard dray with the carriage line crossing the track at a very small angle and filling the cuts with debris.

In the location of both spurs and mainline, preliminary lines are run with the compass, chain and levels to the nearest tenth of a foot, save for turning points and bench marks, when readings are taken to the nearest hundredth of a foot. The compass is accurate enough for the preliminary work and is much faster. When a satisfactory preliminary line has been run, the final location is run in with the transit, chain and levels to the nearest hundredth of a foot taken from a level plug which is driven at each station on the line. Bench marks are established 1.000 feet apart.

All the section, quarter, and "40" lines have been re-run, and stakes set at each 100 feet, numbered from the nearest "40" corner. In this way the preliminary party has a ready check, and can correct any error before it becomes serious. Field notes always include data on where the line crosses a subdivision line, and the superintendent can tell at a glance just how the location is going without delving into a lot of technical details.

Vertical curves of 200 feet length or better are run in on all breaks in grade of 2 per cent. or greater, as the only additional cost is ten minutes' extra work on the part of the engineering crew. The advantages are the doing away with the danger of the cars uncoupling at a break in grade, and it is much easier on the rolling stock, especially a locomotive of long wheel-base. No reversed curves, other than turn-outs, have been run in to date, as we have always been able to squeeze out the forty feet of tangent necessary to give a car time to right itself. Compound curves have averaged two to the mile. Twenty degrees is th maximum curve, though we had to make it 22 degrees in one instance; 2½ per cent. is the maximum adverse grade, and 5 per cent. the maximum grade on main-line and spur alike.

In running the final locations it has proved good practice to set the point of intersection stakes, and reference points are established every 1.000 feet along the main-line. This is a very profitable precaution, as it then becomes a simple matter to run centres after the graders have gone by, or to run in additional spurs should occasion require.

The grading is done by contract. Cuts and fills of three feet and under are done by hand. Three to five feet are made by steam shovel alone and over five feet by steam shovel and dump cars in conjunction. The dump cars are operated by the chunk-out donkey. Two steam shovels are provided for this work, a 40-ton Marion and a 65-ton Thew "whirligig." The Thew is used for the wider cuts and for digging ballast. Fifty-six pound steel is laid on hewn ties, which are delivered on the right-of-way at 22c each. Pile, frame and stringer bridges are used as occasion demands. Superintendent Taylor is an advocate of stout two-pile 8-foot bents for heights of 10 feet and under, and the results attained have proved very satisfactory.

The Prince Albert Lumber Company, Prince Albert, Sask., and the Ladder Lake Lumber Company, Big River, Sask., are sending into the woods this winter about 3,600 men and 750 teams. They propose to cut 100,000,000 feet during the next twelve months and are operating 18 to 20 camps.

The Canadian Government has passed an order-in-council prohibiting the export from Canada of silver spruce (except under license) to all destinations abroad, other than the United Kingdom and British possessions and protectories. This step has been taken in order to protect the supply of this valuable wood for airplane construction.

Logging Railroad Construction

By James O'Hearn*

The first and most important step in constructing roads is the survey. The importance of topography has become recognized and maps have been made of most of the large tracts of timber. The approved method of taking topography is to run base lines one-half mile to one mile apart with transit or compass, chain and level, marking the stations and putting in bench marks frequently, thence running in the cross lines with pocket compass and aneroid, getting distance by pacing. Having the base line to check up on at each end makes this a very accurate and at the same time inexpensive method. The Abney level and the hand level are used by some engineers instead of the aneroid. If the aneroid is used the hand level is of great use as an auxiliary for determining slopes by taking side shots.

Maps are made with contour intervals of from 10 feet to 100 feet, depending on the roughness of the country and the scale of the map. An interval of 25 feet is good for most land and as a rule will show the country with sufficient detail. Relief maps can be used but ordinarily a good contour map will fill the requirements. Hatchures should be used sparingly, it being a great deal of work to make a map showing elevations correctly by their use, and unless they represent something definite on the map they should not be used. We have found them on many maps where, any further than showing the direction of slopes, they were useless.

The next step is the running of preliminary lines. These may be run with a staff compass, chain and level; with a transit using the vernier, chaining distances and leveling with an attachment on the transit, or with a regular level. The transit with the level attachment is considered preferable when the latter method is used. The instruments and the method used varies with engineers, and can safely be left to their judgment. No engineer will use a method by which he does not get accurate results with the least expenditure of labor. The average crew for preliminary work is three men—the transit man and two men to axe and chain. Should time be an essential factor, more men can be added, but it will be at the expense of added cost.

The preliminary line should be platted on paper having the subdivisions of land sketched on, accurately, if known, if not with standard subdivisions, which can be corrected from time to time as the work progresses, by means of tie-ons. The scale used should be large enough to give room for details—not less than one inch to one hundred feet. The number of each hub, the amount of angle, and the direction of each line should be given. Obstructions must be sketched in together with contours of five-foot intervals and extending far enough on each side of line to give an accurate idea of the ground.

Locating the Road

The location can now be made from the preliminary map. It can be run in with the transit, or if the preliminary line is near enough to the desired location, can be put in by offsets. The offset method saves much time and for spurs is accurate enough. If the tract of timber is of considerable size, it is better to put in the main line and main branches more with an eye to favorable grades and curves than to reaching a certain position in the timber. If these are put in well the short spurs will take care of themselves and the logs for most of their journey will have a favorable road. Grades and curves are relative terms and depend upon the country. In some tracts a 4 per cent. grade is heavy, in others it is light. Some camps can make a 12-degree curve the maximum, while others will have a 40-degree maximum. Engineering here depends on getting the best the country allows and making the equipment fit the road. Adverse grades should be avoided when possible. Of course, if the timber is in a hole you have to go after it, but the expense of operating mounts so fast that adverse grades should be the last resort. Velocity grades may be sparingly used but much velocity in handling logs is not recommended.

In breaking grade, we find that the break must not exceed 3 per cent. on account of the danger of cars coming uncoupled. The break should be rounded by the use of the vertical curve. On main lines grades should be compensated for curvature, but we do not deem that necessary on the short spurs.

Up to the present, most of the grading has been done by hand. Chunks are sawn up to such lengths that they can be rolled out with peavies, stumps are given enough powder to blow them in the clear, and the earth is cast, wheeled or carted in dump cars run by man power.

When rock is encountered, it is hand drilled and broken up by blasting small enough to be lifted into the wheelbarrows or cars. Camps getting more extensive roads are using power.

The first step forward consisted of sending a donkey ahead when the falling and bucking has been done and the stumps shattered with

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* English Lumber Co., Mt. Vernon, Wash. An address delivered before the Pacific Coast Logging Congress.

powder to shunk out the right-of-way and make the larger cuts and fills by means of a steam scraper. The grading has to be sufficiently heavy to have this method pay. When cuts and fills do not run more than four feet and the chunking out is not exceptionally heavy, we have found hand work cheaper. In heavy work, steam shovels are becoming common and it is a forward step. In side-wall cuts they can waste the earth, while in heavy thorough cuts the earth must be hauled away, preferably by locomotives and dump cars, and can often be used in making fills. As rock work becomes more common, the need of a light, portable rock drill outfit is felt. These are being experimented with at present by manufacturers and will likely be on the market in the near future. The use of powder has become practically standardized, 20 per cent. strength being used for stumps, and from 40 per cent. to 60 per cent. strength—mostly 60 per cent.—for rock work.

Grading Costs

The cost of grading varies so much that figures represent little. Some spurs will cost but a few dollars per station, while others will run up in the hundreds. In looking over our records, we find one spur graded for $12.75 per station; on another we find a hard-pan cut with steam scraper cost $142 per station or 62 cents per yard. A pile trestle on the same line, 550 feet long by 45 feet high, cost $2.56 per running foot.

Fifty-five to 60-pound rail is in general use, It combines the requisite strength with weight such as may be easily handled by the ordinary section crew. Most of the steel laying is done by hand, though some camps are beginning to use cranes. The ordinary procedure in changing steel from one spur to another is to spot a flat car about 600 feet from the end of the spur to be picked up; the crew uses a push car, picks up two rails with the ties, runs up to the flat, transfers, and goes back for more. In laying, the operation is reversed. Camps fortunate enough to have a spare locomotive get much better results by discarding the push car and keeping the locomotive with the steel gang.

Ties are being made more nearly standard size than formerly. The makers used to think that anything was good enough for a log road. Camps that have mills in connection usually use sawn ties. Hewn ties made from split fir and cedar, and pole ties of fir, cedar and hemlock are used. Split fir and cedar are going out of use. They are made from No. 1 logs and these are becoming too valuable to split up into ties.

Split fir ties are usually made from old-growth dead trees, standing on some tract that is too scattering to log. They make a lasting tie, except that a good deal of the elasticity is gone from the timber and spike holes keep working larger until the rails are loose. Split cedar ties are too soft to hold spikes, especially on curves; also the rail will cut down through. When used on tangents with rail plates, they are probably the most lasting ties we have in the Northwest. Pole ties, if cut, peeled and allowed to season, are the best all round for logging purposes. On bridges, sawn ties 6 x 8 inches by 10 or 12 feet, surfaced one side, are used. Ordinarily ties are spaced 24 inches center. If the rail is light for the equipment, they are placed closer. Spacing on bridges is about 14 inches center to center.

In laying steel on spurs time is not usually taken to curve the rails to fit the curves, the rails being sprung with bars and spiked to place. On main branches it is much better practice to curve the rails to fit on any curve of more than six degrees. Curves on main branches should have not less than three braces per rail, and have more elevation than the ordinary speed tables would require. Curves of more than 12 degrees should have a guard rail; and all bridges, whether straight or curved, should be double guarded, the guard rails being placed about 12 inches inside of each rail. Track creeping on grades can be retarded, but not entirely avoided, by having track well ballasted and using slotted angle bars. Split rails are used at the foot of grades to allow the track to run by; it being considered safer to let it creep than to try to hold it and have it buckle out.

Gravel Costs

The Cascade district is made up of so many different formations and these are so well broken up and intermingled that nearly every camp can find one or more gravel pits where gravel can be secured for ballasting. Sometimes the gravel is hard to get but we must have it to have a track. We have hauled gravel for five miles up grades running from 2 per cent. to 8 per cent., being able to take but two loads per trip with a 60-ton locomotive, but figured it paid to do it. The gravel is loaded by hand, by steam scraper, by steam shovel, or in some cases where it is taken from the beach or river, by dredge. By hand is, of course, too slow, and must be avoided in operations of any size. The scraper will load gravel cheaply by making a trap to spot the cars under and having a reasonably long gravel bank to scrape from. The steam shovel is the ideal way and a camp of much size can ill afford to be without one. Costs are only relative, depending on so many factors that what would be cheap in one camp would be considered expensive in another. In miles and putting on 1,500 yards per mile the costs were:

Loading	12.2 per yard
Hauling, including fuel	17.0 per yard
Surfacing track	21.5 per yard
Total	50.7 per yard

or about $760 per mile. On another part with an average haul of two miles and putting on 900 yards per mile we find:

Loading	8.6 per yard
Hauling, including fuel	9.0 per yard
Surfacing	25.2 per yard
Total	42.8 per yard

or about $385 per mile. We loaded with steam shovel and hauled on Rodger's ballast cars and flat cars on which we put a sideboard that could be dropped to facilitate unloading. Figures given include only labor and materials actually used in the work, no depreciations or rentals for machinery used. Common labor at the time was $2.50 per day.

Maintenance of track will depend upon all that has gone before. If the grade is well built and ditched, good ties used, care taken in laying steel, and track well ballasted, the maintenance cost will be light. More attention is being paid to this part of the work and the five screeches of the locomotive calling the section crew does not resound through the woods quite so often as formerly. We consider we have an average logging track, yet in the first six months of this year out of 8,484 loads hauled we lost 31, as follows:

Stripped in hauling	6
Defective trucks account chains, king pins, etc., breaking	8
Defective track	6
Defective loading	4
Unknown causes	7

Our average haul after the woods switching is about 12 miles. It costs us about $1.50 per M. to pick those logs up again, besides time the yarding crews may lose and the breakage of cars. While we were fortunate in not having any personal injuries in connection with these, the danger is there. I do not like to stand up here and tell you what a poor railroad system we have but those are the facts—facts that we would like to, and hope to, get away from.

A New Forest Experiment Station

Following a recommendation by the Canadian Advisory Council for Scientific and Industrial Research, 100 square miles of the Petawawa Military Reservation, Ontario, has been set aside by the Militia Department as a forest experiment station, in co-operation with the Dominion Forestry Branch. This area comprises about two-thirds of the total reservation, all of which will still, however, be available for military purposes, so far as needed.

Petawawa is an artillery training camp, and a large portion of the reservation is ordinarily not needed for military purposes. It is situated in a typical white pine district, and was almost completely logged off before the land was acquired by the Dominion Government. There is, however, a fine stand of young forest growth, in addition to a limited amount of larger material.

A considerable amount of cordwood is cut each year for camp use for fuel, etc., and the Forestry Branch will supervise this cutting according to definite plans and will observe and record the results with a view to drawing conclusions as to silvicultural practice for the region, as far as practicable.

A party is now at work making a preliminary survey of the area set aside for forestry purposes. A type map will be prepared, and detailed studies will be made of volume and rate of growth, as well as of reproduction. It is hoped that scientific work of this character may be carried on from year to year and extended to cover other investigations appropriate to a regularly established forest experiment station.

The party now at work at Petawawa is under the charge of D. W. Lusk, who has been with the Dominion Forestry Branch for about three years, previous to which he was employed by the Laurentide Company, Ltd., of Grand Mere, Quebec. Mr. Lusk is assisted by four men, of whom two are returned soldiers. One of these, R. A. Courtnage, is an undergraduate of the Faculty of Forestry at Toronto University, who was a member of the Royal Flying Corps and was incapacitated for further military service by virtue of injuries received in an accident in England.

Mr. William Rutherford has been elected vice-president of the Win-the-War Electoral Association of Westmount-St. Henry, Montreal.

Making Winter a Season of Summer Profits

By F. B. Mendoza*

If he returned to life, what would be the fate of the party who started the notion among retailers that winter was a season of sickly profits If he were to see the change occurring within the last few years—if he were to learn of the cold weather protection campaign and the profits it has made for the dealer—he would choke with surprise exceeding that of Rip Van Winkle on his return home. The idea that the cold season is one of "dull" times and that it will always remain so is still as common as grass in the meadows.

The writer was commissioned to stray out among lumber yards in several states to determine the attitude of the average lumberman toward winter as a business period and, if possible, to dig up facts and details whereby the dealer could be helped by the service division. The results obtained are too numerous to describe in this brief article; however, a few will illustrate the mental trend of the average dealer.

In a certain city which we shall call X there are a very few industries. The population is twenty thousand. The dealers are temporarily handicapped because of the scarcity of carpenters, and so building is being retarded. Notwithstanding this, every man selling lumber advertises frequently and quite liberally. With one exception, they all believed that the winter would be a brighter season than last year. For downright practical optimism they have no betters.

The next morning a visit was made to a city forty minutes' ride from X, having a population slightly exceeding fifty thousand. Factories enjoying overbursts of good times were in evidence, and no one had to pity the unemployed, because of the absence of idle people. The first call was made at the office of an old-established firm, and there it was learned that people did not build to rent out, or bother with storm doors and sash, and that very few combination storm and screen doors were sold—winter was to bring us "bad, bad times," and the lumber business was bound for limbo, and so on and so on. Next a call was made at a yard five or six blocks up the street, and there it was stated that though business was not at its best, still there was a fairly good bit of it coming in. " Oh, yes; we sell combination storm doors and storm sash, now and then—expect to do more of it this winter," responded the gentleman interviewed.

Everywhere it was found that very, very few dealers had planned anything to meet the reduction of building usually characterizing winter wherever snow falls. There was one thing always in evidence which was especially pleasing, and that was the sight off "potbelly" stoves. One can picture certain gentlemen basking within the heat zone of these, instead of hustling around and rooting up orders for combination storm doors and sash, and stirring up orders for remodelling and alterations.

Most of the people interviewed were practical men—fellows with a reserve fund of "hoss" sense. They simply looked at present conditions from an old-time viewpoint.

The fact that not a great percentage of dwellings have storm doors and sash is what led to the present cold weather protection campaign for the dealer.

The average lumber dealer's indifference to public demand is one of the seven wonders of the commercial world. It is an indifference born of anything but fact. However, there is one fact from which none can escape: To the degree that the public is made to feel the necessity for a commodity in the same proportion will its sale increase. Illogical questions and arguments can be hurled at it; but, like all truths, it will stand up under the most brutal of bombardments. Study it from all sides and you will find it solid, massive, and impregnable.

The How, the Where, and the Why

There are but three ways by which the lumber dealer can make the necessity for combination storm doors and sash felt. He may solicit, circularize or advertise in newspapers. Let us analyze the last named.

The man who does not believe in newspaper advertising should be relegated to where things unusual and misshapen are displayed. While it is true that here and there can be found small-town newspapers charging rates out of proportion with what is moderate, yet it should not be thought that the small-town weekly is not a valuable medium. The advertiser in the smaller newspaper has the advantage of knowing practically all of its readers.

Advertising is education, though education is not always advertising. This was not so glaring a fact in the yesteryears, when advertisements were considered a thing apart from the news. To-day most people buy their newspapers and magazines as much for the advertising as for the news. From O'Sullivan we learned that leather heels jarred the spine. Heinz told us all about benzoate of soda long before Dr. Wiley and the Battle Creek fellows showed us the value of cereals.

As stated, the object in planning the cold weather protection campaign was to bring about a change—to induce the dealer to try it out and to prove to him that to the degree he makes felt the necessity for combination storm and screen doors and storm sash, in the same proportion will the sales of these increase.

Realizing the importance of the right kind of advertising, steps were taken to start the dealer off without involving his employing a professional writer. Copy was prepared for the nationally-read magazines telling the public about the new system in an interesting way, setting forth the need for such equipment from the standpoint of comfort and health as well as the saving which its installation effects. The tendency of this advertising is to create a demand for the cold weather protection—to place the public on speaking terms with this improvement, arouse their interest, and, roughly speaking, get them all primed for the finishing touches of the ambitious dealer.

Next, the advertising department was instructed to prepare newspaper advertisement copy and an artist was commandeered to furnish illustrations for these newspaper advertisements. Then, in order to complete the whole plan, this material, illustrations and all, was cast into electrotypes. These are now being distributed without charge, along with a goodly supply of envelope stuffers and a quantity of booklets describing the system fully, which are to be distributed among the dealers' prospects. In every case provision is made for the name of the dealer to appear on literature and other advertising matter.

But this was not all; the service division even offered to follow up the lumberman's prospective customers.

To round out the whole campaign, the editing and advisory end of the advertising department was offered to the retailer. He may now write his own advertisements and have them revised and laid out for the asking. This permits a wealth of freedom where the dealer feels certain that a particular kind of appeal, peculiar to his vicinity, will be more effective. It also allows him to have a wider range instead of confining himself to the ready-to-use advertisements. This service is also free.

The results have exceeded all expectations. Men engaged in the lumber trade responded from whom not a great deal of action or enthusiasm was expected. Others, in towns of small populations, requested the ready-to-use advertisements to be rushed. Another offered to pay for writing a small folder rather than submit his own copy in the rough.

Slowly but surely the dealer is realizing that he is the master of the situation, and that opportunities depend largely on how he creates them. He is awakening to the imperative need of educating the public to want commodities that have been slow sellers in the past. There is, indeed, a time to come when he will teach the public the economy and logic of building and owning their own homes and thus create sales possibilities for himself.

Last but not least, he will smile at the old, time-worn bogey of "dull" times in winter.

*Advertising Manager of the Morgan Sash and Door Company—reproduced from American Lumberman.

A Mail Order Deal

Down in Oklahoma the other day a man went into a store to buy a saw. He saw the kind he wanted and asked the price. It was $1.65, the dealer said.

"Good gracious!" said the man. "I can get the same thing from Sears, Roebuck & Co. for $1.35."

"That's less than it cost me," said the dealer, "but I'll sell it on the same terms as the mail order house just the same."

"All right," said the customer. "You can send it along and charge it to my account."

"Not on your life!" the dealer replied. "No charge accounts. You can't do business with the mail order house that way. Fork over the cash."

The customer complied.

"Now 2 cents for postage and 5 cents for a money order."

"What ——!"

"Certainly; you have to send a letter and a money order to a mail order house, you know."

The customer, inwardly raving, kept to his agreement and paid the nickel.

"Now 25 cents expressage."

"Well, I'll be ——!" he said, but paid it, saying: "Now hand me that saw and I'll take it home myself, and be rid of this foolery."

"Hand it to you! Where do you think you are? You're in Oklahoma and I'm in Chicago, and you'll have to wait two weeks for that saw."

Whereupon the dealer hung the saw on a peg and put the money in his cash drawer.

"That makes $1.67," he said. "It has cost you 2 cents more and taken you two weeks longer to get it than if you had paid my price in the first place."—Square Dealer.

Machinery and Equipment

What Manufacturers of Logging, Sawmill and Woodworking Appliances are Doing

The New Plant of the Philadelphia Textile Machinery Co.

The new plant of the Philadelphia Textile Machinery Company, Philadelphia, Pa., manufacturers of the well-known "Proctor" veneer dryers, is modern in every detail, and all possible consideration has been given to the comfort and convenience of the employees. The plant is located on high ground, where plenty of fresh air, light and sunshine are available. The buildings are of an attractive colonial type, of brick and concrete, with white trimmings. A large building of two storeys is devoted to the offices, with private reception rooms on the first floor. The second floor contains a well-lighted drafting-room. This department also includes a dark room, with every facility for photographic work. In the basement of this building the company's important papers, contracts, and records are stored in a large vault. The various supplies for the offices are also kept in this department, in a systematic manner, which prevents any confusion.

The manufacturing plant is contained in a building 270 x 280 feet, located on the Philadelphia and Reading Railroad, which furnishes excellent shipping facilities. The company has a siding 280 feet long, running into the plant for its full length, from which machinery may be loaded and unloaded indoors. In this department the floor is on a level with the floor of the car. A track scale of 100 tons capacity is installed for weighing shipments, and a two-ton travelling crane is located over the siding, which will handle the heaviest loads.

The floor of the shop is laid with hexagonal creosoted wooden blocks, a type of floor which has been found to give the very best possible service and to be exceptionally easy on the feet of the employees. The plant is well lighted, having glass sides and skylights, which are so designed that no shadows are thrown in any part of the building.

The manufacturing operations are planned in a thoroughly systematic manner. The materials are unloaded on the receiving platform at one end of the plant and then are stacked in their proper bins at that end. From the bins they are routed down the floor of the shop on one side, through the various stages, and brought back along the other side, where the various finished parts are assembled and the machinery put together for testing before being taken apart for shipping.

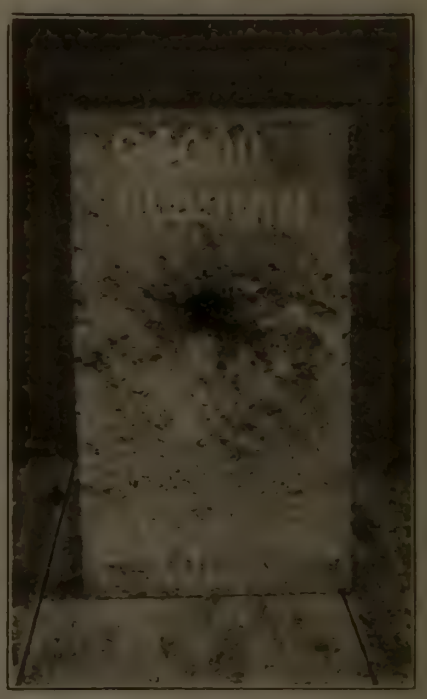
The equipment of the shop is of the latest improved types. In the centre of the shop there is a "planning" room, where the various jobs are routed as they come in, and are listed under the name of the man in charge of that particular job until it is completed. A special feature is the location of the emery grinding machinery in an enclosed room, equipped with suction tubes to remove the dust as it flies from the wheels.

The company also operates a well-equipped experimental department, where tests are conducted of the various types of dryers which they build and the effects secured under varying conditions. The whole plant is operated by electric power.

There are many other extremely interesting features of this modern plant which will commend it to all who are interested in modern manufacturing methods.

Testing Russian Shells

Few people know the methods used to test the ammunition being made in the United States for shipment to the Allies. One method in use by one of the Eastern cartridge manufacturers is interesting to sawmill men because this manufacturer takes a piece of Simonds saw steel and subjects it to a hail of bullets fired from a fixed distance from rifle and machine guns. The accompanying illustration represents a piece of Simonds saw steel after it had withstood an impact of 24,000 Russian bullets.



Fine new plant of the Philadelphia Textile Machinery Company, Philadelphia, Pa.

A Boiler Seam Protector

The National Boiler Protector Company of Canada, 910 New Birks Building, Montreal, are putting on the market the National boiler girth steam protector, which was patented in Canada in May last. The object of this device is to prevent trouble to seams in horizontal boilers, due to crystallization and fire cracks, caused by the intense heat concentrated against the seam. The protector consists of five sections, covering the circle seam. Each section being independent of the other, there is no interference due to contraction or expansion. Each section consists of a soft bronze wedge nut, which wedges between two rivet heads. The wedge is drilled and tapped for a ½ in. or ⅝ in. cap screw, and is so placed between the rivet heads as to come in close contact with the boiler shell, by which it is kept cool. The lug which the bolt supports is also in contact with the boiler shell. The fire-brick tile slips over the lug, covering the attachment, rivet heads and seam, fitting tight against the shell. The protector is as useful in new as in old boilers in preventing fire cracks and leaks.

Packard Company Establish Technical Training School

On account of the scarcity of skilled men in connection with the automobile industry the Packard Motor Car Company have undertaken a progressive move which is calculated to furnish a greater supply of this important class of employees. The company are opening a new technical service training school, the purpose of which is to provide technically-trained men for positions at field service stations and also at the factory. This school is open to all men who have had any automobile experience. Every man accepted will be paid while he is being taught, and when his course has been completed a position will be found for him in a Packard service station or at the main factory, and he will then be paid the prevailing scale of wages. This school is for men of the highest calibre only. The course will appeal to foremen in automobile factories and others who are ambitious for field service where the remuneration is greater.

The new Packard Technical Service School is divided into three parts. viz.: Mechanical training and underlying principles; mental training, to give independence of thought in solving service problems; and general training in business to give better perspective to the employee.

The Fuel Value of Wood

Persons who plan to relieve the coal shortage this winter by burning wood can figure, roughly speaking, that two pounds of seasoned wood have a fuel value equal to one pound of coal, according to experts of the United States Forest Service. While different kinds of wood have different fuel values, the foresters say that, in general, the greater the dry weight of a non-resinous wood the more heat it will give out when burned.

For such species as hickory, oak, beech, birch, hard maple, ash, locust, longleaf pine or cherry, which have comparatively high fuel values, one cord, weighing about 4,000 pounds, is required to equal one ton of coal.

It takes a cord and a half of shortleaf pine, hemlock, red gum, Douglas fir, sycamore, or soft maple, which weighs about 3,000 pounds a cord, to equal a ton of coal, while for cedar, redwood, poplar, catalpa, Norway pine, cypress, basswood, spruce, and white pine two cords, weighing about 2,000 pounds each, are required.

Weight for weight, however, there is very little difference between various species. Resin affords about twice as much heat as wood, so that resinous woods have a greater heat value per pound than non-resinous woods, and this increased value varies, of course, with the resin content.

The available heat value of a cord of wood depends also on the amount of moisture present. When the wood is green part of the heat which it is capable of yielding is taken up in evaporating the water. The greater the amount of water in the wood the more heat is lost.

Furthermore, cords vary as to the amount of solid wood they contain, even when they are of the standard dimension and occupy 128 cubic feet of space. A certain proportion of this space is made up of air spaces between the sticks, and this air space may be considerable in a cord of twisted, crooked, and knotty sticks. Out of the 128 cubic feet a fair average of solid wood is about 80 cubic feet.

This, however, applies to the standard cord, in which the sticks are cut to four-foot lengths and piled four feet high and eight feet long. Instead of buying the four-foot lengths, however, most people nowadays have the sticks cut into two-foot lengths by a gasoline saw. This results in a saving of both time and labor. The purchaser should, however, take care to see that he gets full measurement.

Where wood is to be burned in a stove or furnace intended for coal it will be found desirable to cover the grate partly with sheet iron or fire-brick, in order to reduce the draught. If this is not done, the wood is wasted by being consumed too fast, and makes a very hot fire, which in a furnace may damage the fire-box.

Kiln Drying Woods for Airplanes

When the United States entered the war the need for wood to build airplanes quickly created a difficult problem. Most of the air-seasoned wood available had been bought for airplanes for the allied nations abroad. Thorough air-seasoning of such stock requires from one to three years, according to the size and kind of wood. Kiln-dried stock under the methods ordinarily used has frequently proved unsatisfactory, and for that reason airplane manufacturers have been reluctant to use it. If the needs of the fighting forces were to be met adequately and without prolonged delay, it was essential that methods of conditioning should be available in which full confidence could be placed.

Long before this situation developed, the Forest Products Laboratory of the Forest Service, at Madison, Wisconsin, had been making a scientific study of the drying of wood, and had developed a method of drying which has been very successful with all the woods tried. Several kilns have been built at the laboratory for experimental purposes and a number of demonstrations made in commercial kilns. Ash and spruce are the woods most in demand for airplane construction, and, anticipating the present situation, the Forest Service secured a shipment of partially air-seasoned ash and spruce plank for preliminary tests.

This material was kiln-dried without injury. Later thoroughly green Sitka spruce, white ash (Northern and Southern), white oak, Douglas fir, Western white pine, and mahogany were secured in the log for testing. The spruce and ash logs were cut up and the green material from each species divided into three matched groups. One group of each species was tested green, another has been set aside to be tested when it has air-dried, and the third group was kiln-dried, trying several methods, and then tested. Only the results of tests on the spruce have so far been analyzed. Comparison with standard tests which had already been made shows that Sitka spruce can be kiln-dried from the green condition with no more—perhaps less—injury to its mechanical properties than by air-seasoning. Definite specifications have been prepared for kiln-drying spruce green from the saw for airplane construction, and, if rigidly enforced, they will insure kiln-dried stock of this species equal to air-dried stock.

A preliminary study of propeller construction has shown the need of such information on propeller woods. The testing of the ash and other species now on hand, which include several propeller woods, is being pushed as rapidly as possible, and there seems to be reason to expect as favorable results as for the spruce.

Ten Thousand Canadians in Forest Camps

Sir Edward Kemp, Minister of Militia, in a recent statement in the House of Commons, said that the number of men in Canadian forestry battalions overseas was at present as follows:

Battalion.	Officers.	Ranks.
224th Forestry Battalion	47	1,536
230th Forestry Battalion	30	1,038
238th Forestry Battalion	44	1,084
242nd Forestry Battalion	44	1,006
Total	165	4,664
		4,829
Drafts.		
Drafts from various districts	109	3,567
Drafts from the 230th Forestry Battalion Depot and not included in the 230th Battalion	40	913
122nd Battalion (converted upon arrival in England)	26	686
Total	175	5,166
		5,341
		10,170

In addition to the above a large number of men already overseas were formed into forestry companies.

The following special rates of pay are given specially qualified men after arrival overseas; these rates include regimental pay and field pay of $1.10 per day:

	Consolidated rate of pay.
Millwrights, two per company of 250	$3.00
Mill sawyers, two per company of 250	3.00
Edgermen, two per company of 250	2.25
Saw filers, two per company of 250	2.25
Engineers, two per company of 250	2.25
Log setters, two per company of 250	1.75
Cooks, two per company of 250	1.75
Saw hammerers, one per three companies	5.50

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) $2.10 per inch, each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Wanted

Large size Elm Logs wanted. Address P. O. Box 5, Papineauville, Que. 21-2

Wanted

4 cars Sawdust, 3 cars Spiles, 5 cars Hemlock or Cedar Ties, 2 cars Cull Basswood, 6 cars Cordwood, a number of cars Hardwood or Softwood Slabs. Apply Box 637, Canada Lumberman, Toronto, Ont. 20-23

Wanted—Lumber

Slabs and Edgings—Hardwood and softwood; five to five hundred cars, for cash. Box No. 641, Canada Lumberman, Toronto. 21-24

Maple Squares Wanted

Wanted to purchase for export in 1918 one million feet Maple Squares: 1¼ in., 1½ in., 1¾ in., 2¼ in., 2½ in.; lengths, 12 in., 18 in., 24 in., 30 in., 36 in., 42 in., 48 in.

State price air-dried and bundled f.o.b. cars. State shipping point. Box 625, Canada Lumberman, Toronto, Ont. 18-21

For Sale–Lumber

For Sale

200,000 ft. 1 x 4 and up Mill Run Spruce
200,000 ft. 1 x 4 and up, 6/11 ft. Mill Run White Pine.
150,000 ft. 1 x 12 in. 12/16 ft. Common and Dressing White Pine.
150,000 ft. 1 x 10 and 12 in. No. 1 White Pine Mill Cull.
150,000 ft. 1 x 7 and up White Pine Roofers.

The Elgie & Jarvis Lumber Co., Ltd.,
21-21 18 Toronto St., Toronto, Canada.

Lumber For Sale

300,000 ft. B.M. 1 x 4 and up Clear and No. 1 Spruce.
400,000 ft. B.M. 2 x 4 to 2 x 10 Spruce. Piled widths and lengths separate.

GEO. C. GOODFELLOW,
c Montreal, Que.

For Sale

A limited number of cedar Telephone Poles, 25 ft. to 35 ft. long. Also a few cars 8 ft. cedar fence posts, 4½ in. and up at top. For particulars apply Lynch & Ryan Lumber Co., Marmora, Ont. 18-21

For Sale–Machinery

For Sale

FOR SALE Log Loader, Type C, immediate delivery, attractive price, first class condition, made by American Hoist & Derrick Co.

J. R. BAXTER & CO., LTD.,
102 St. Antoine St.,
21-21 Montreal, Que.

For Sale

One 3-roll 52-in. Berlin Sanding Machine. Used only few weeks.

THE BEAVER BOARD CO.,
20-20 Buffalo, N.Y.

Slab Resaw For Sale

Heavy Horizontal Slab Resaw, Gidlings and Lewis Make, 6 ft. wheels, 8 in. saws; used only four months.

FIRSTBROOK BROS. LTD.,
20-23 Toronto, Ont.

Machinery For Sale

One 36 in. planer, roll feed, with countershaft.
One Jackson & Cochrane 24 in. planer, roll feed, with countershaft.
One 36 in. two drum sander, Cowan & Co.

R. W. NICHOLSON,
18-21 Strathroy, Ont.

Machinery For Sale

1 Goldie & McCulloch Engine, 16 in. x 38 in. Complete with Heater, Pipes, Oil Pump, etc. In first-class condition.
1 Holmes Matcher.
1 Band Rip Saw.
1 Dynamo Engine, Jewel No. 3.

R. Laidlaw & Co., 65 Yonge Street, Toronto.
19-21

For Sale

No. 5 Double Bale, Geared Screw, Power Shaving Baling Press, manufactured by the P. K. Dederick Sons, Albany, N.Y.

Capacity two bales, about 30 in. x 16 in. x 16 in., weighing approximately ninety pounds each per stroke of machine.

This machine has been in use but five or six months and is in first class condition.

It will be sold at a bargain.

THE DE LAVAL CO., LTD.,
19-22 Peterborough, Ont.

Box and Lumber Machinery For Sale, Second-Hand at Muscatine, Iowa

3—Dbl. Surfacers, 27 x 8, 30 x 12, 26 x 7, very fine condition.

Band Resaws

1—54-in. Gilbert, 1 60-in. Fischer, 1 72-in. Gilbert, 1 60-in. Fischer Db. Band Resaw.
1—No. 6 Chicago self feed rip-saw.
2—Morgan boxboard machines.
1—Fischer boxboard machine.
2—Morgan No. 8 lockcorner machines.
1—5 ft. knife grinder.
1—Morgan No. 1 setting up machine.
1—30-in. knife grinder.
Exhaust fans—1 60 in., 1 45 in., 1 36 in. All complete with piping.

Belting Shafting Pulleys Hangers

Cleveland Belting & Machinery Co.,
21-22 Cleveland, Ohio.

Wanted–Machinery

Refuse Burner Wanted

Second-hand Refuse Burner in good condition, 12 to 15 feet in diameter, and moderate height. Address with full particulars and price.

REAMSBOTTOM & EDWARDS,
20-21-22 Connaught Station, Ontario.

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

WANTED POSITION as trimmer man, air lift; five years' experience mill cutting, 150 M. daily. Address Z. T. Harlow, Crossburn, Nova Scotia. 18-21

YOUNG MAN, six years' experience as stenographer and bookkeeper in lumber business, desires change. Best of references. Box 629, Canada Lumberman, Toronto, Ont. 19-2

POSITION WANTED by an experienced lumberman thoroughly understanding woods and mill operations; eighteen years' experience; the last ten years as manager of logging and saw mill plant.

Want to go where there is further advancement for the right man.

Box 638 Canada Lumberman, Toronto, Ont. 20-20

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

WANTED An experienced young traveller, knowledge of lumber and the trade. Applications confidential. Box No. 639, Canada Lumberman, Toronto, Ont. 21-21

Competent experienced man to handle the sales of Quebec firm operating from the stump to planing mill wanted. Must have the best of references. Apply Box 640, Canada Lumberman, Toronto, Ont. 21-21

Business Chances

AGENCIES WANTED—French engineer having large established clientele, desires direct agency for France of labor-saving machinery of all kinds for wood and iron working, as well as factory equipment. Headquarters in heart of Paris, near the Opera. Write E. A. B., Room 444, 14 Phillips Square, Montreal. 21-22

Saw Mill For Sale

Complete Sawmill with timber rights and freehold lands for sale, excellent shipping facilities. Mill situated County of Shefford, with a visible supply of soft wood and hardwood timber in the neighborhood for an extended life. Address P. O. Box 222, Waterloo, Quebec. 16-t.f.

For Sale

Timber Limits and Sawmill, estimated fifteen million feet of hardwood and ten million feet soft woods. Sawmill capacity 25 M. feet, shingle mill 125 M. Docks, tug, booms, log going on ft, houses, etc. Price $35,000.

The Manitoulin Lumber Co., Ltd.,
11-22 Walkerville, Ont

Sawmill For Sale

Saw, Shingle and Planing Mill in Bayfield, on Lake Huron, will be sold at a bargain. Practically new and cost over $6,000, and will be sacrificed for $4,500 on easy terms. Plenty of available timber for this mill which will make more money than the best 100 acre farm in Huron County.

This is a gold mine for the enterprising man with small capital. Apply to

INO. B. MUSTARD,
19-22 Brucefield, Ont.

For Sale

[illegible] acres well timbered bush in township of Sinclair, new mill, stable and camps. Loading point, Huntsville. Reason for selling, ill-health. Apply to

HOLMSHEAD & ROGERS,
21-t.f. Huntsville, Ont

Mill Plant and Limits For Sale

43 Miles Limits on 31 Mile Lake, Gatineau Valley, containing Basswood, Spruce, Fir, Pine, Cedar, Birch, Maple and Pulpwood.

New Waterous 8 ft. Improved Double Cut Band Mill complete. Steam Alligator, Boats, Sleighs, Wagons, Harness, etc. For further particulars apply to

A. W. STEVENSON,
P. O. Box 2624,
8-t.f. Montreal, Que.

For Sale

About five or six tons of 5/8 and 9/16 tested chain in lengths from 27 ft. to 30 ft. with ring on one end and hook on the other end. Address Drawer "F," Sarnia, Ont. 19-t.f.

Tide-Water Stumpage For Sale or Exchange

For sale, or will exchange for good ranch or farm land, B. C. Tide-water stumpage, cruised and surveyed.

CARL BLOCK,
19-t.f. Peoria, Illinois.

Tenders for Timber on Lower French River Reserve

Sealed tenders, addressed to the undersigned, and marked on the face of the envelope "Tender for Lower French Timber," will be received until noon of Wednesday, November 28 next, for the merchantable pine, hemlock and cedar timber on the Lower French River Reserve in the district of Parry Sound.

Tenderers should state the amount of cash bonus they are prepared to pay for the timber over and above crown dues payable under sworn returns furnished by a licensed culler. The tariff of dues is as follows:—

Pine, $2.50 per M.f.b.m. or $25 per M.cu.ft.

Hemlock, $1 per M.f.b.m. or $10 per M.cu.ft.

Cedar, $1.50 per M.f.b.m. or $15 per M.cu.ft.

The rate of dues on timber taken out in other form than saw-logs can be had on application.

An annual license will be granted to the successful tenderer and five years will be allowed for the removal of the timber under the Regulations of the Department. A copy of such Regulations can be secured from the undersigned.

An accepted cheque on any Canadian chartered bank for ten per cent. of the bonus tendered should accompany each tender, the balance of the bonus to be paid within thirty days from the date of notification of acceptance of tender.

Any further information that is desired can be obtained upon application to the undersigned or to Alex. Logan, Indian Superintendent at Parry Sound.

The unauthorized publication of this advertisement will not be paid for.

DUNCAN C. SCOTT,
Deputy Supt. General of Indian Affairs.
Department of Indian Affairs,
Ottawa, October 20, 1917. 21-22

Timber Limits For Sale

Forty square miles of timber under license in the Townships of Thompson, Bright, and Bright Additional for sale.

License covers all classes of timber, except a few located and patented lots on which pine only is under license.

Limits are well timbered and well situated, between Thessalon and Blind River.

On account of death of one licensee and the absence of one overseas, these limits will be sold at a very reasonable price.

Full particulars on application to

H. L. Sargent,
Box 877,
Sault Ste. Marie,
Ont.

Dated 10th October, 1917.

TENDERS for Pulpwood Limit

Tenders will be received by the undersigned up to and including the seventeenth day of December next for the right to cut pulpwood and pine timber on a certain area situate in the vicinity of the Kapuskasing River in the Districts of Timiskaming and Algoma.

Tenderers are to offer a flat rate per cord for all classes of pulpwood, whether spruce or other woods. The successful tenderer shall be required to pay for the Red and White Pine on the limit a flat rate of $10 per thousand feet board measure.

The successful tenderer shall also be required to erect a mill or mills on or near the territory, and to manufacture the wood into pulp and paper in the Province of Ontario, in accordance with the terms and conditions of sale which can be had on application to the Department.

Parties making tender will be required to deposit with their tender a marked cheque payable to the Honourable the Treasurer of the Province of Ontario, for Twenty-five Thousand Dollars ($25,000.00), which amount will be forfeited in the event of their not entering into agreement to carry out conditions, etc. The said Twenty-five Thousand Dollars ($25,000.00) will be held by the Department until such time as the terms and conditions of the agreement to be entered into have been complied with and the said mills erected, equipped and in operation. The said sum may then be applied in such amounts and at such times as the Minister of Lands, Forests and Mines may direct in payment of accounts for dues or for any other obligation due the Crown until the whole sum has been applied.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

G. H. FERGUSON,
Minister of Lands, Forests and Mines.
Toronto, September 19th, 1917.

N.B.—No unauthorized publication of this notice will be paid for. 20-24

Jobbers Wanted

We wish to let several contracts to take out logs on Berth No. 6, being broken front lying between the Magnetawan and French Rivers. This berth is all convenient to Canadian Northern Railway.

John Harrison & Sons Company, Limited,
Saw and Planing Mills,
9-t.f. Owen Sound, Ont.

Unusual Lumber Cargo

The Japanese steamer Somedono Maru left Portland, O., recently for Japan, carrying an unusual cargo of lumber, in that it was made up of timbers exclusively. It is understood that the Japanese buyers specified, in placing an order for the material, that none should go aboard the vessel with a diameter less than 18 inches. The result is most of the stuff is 24 inches in diameter and some 36 inches in diameter, with a percentage 36 by 40 inches. These timbers are intended for resawing on the other side, and in filling the order it is said the mills simply hauled logs from the water and squared them, cutting timbers as large as the logs permitted. The cargo measured about 3,200,000 feet, the best stowage not being possible because the material ran about 40 feet long, and it was impossible to fill the holds lengthwise. Had she loaded an ordinary lumber cargo the Somedóno Maru would have taken about 4,000,000 feet.

Forest Protection Improved

Over 2,500 settlers applied for and received permission to burn slash in Northern Ontario during the past summer and fall, under the operation of the new regulations based upon the Act of last season. While there are no statistics of previous years available, on which to base a reliable comparison to indicate the extent to which the new system is protecting the northern forests, the records of the past year show that very few of the fires that rangers have had to deal with can be traced back to settlers' fires. Under the permit system no settler can burn slash until he has received permission from a ranger, who must first satisfy himself that weather conditions and the location of the slash are such as to ensure against bush fires.

Order for Million Tent Pins

An order for a million tent pins for the United States Government has been given to the Springfield Planing Mill Company. Special equipment is now being installed to expedite the manufacture of these pins. Maple and ash will be used in their manufacture. The pins are to be 24 inches long. The company expects to get out about 10,000 pins daily. The pins will be shipped to San Francisco for distributioin. The company expects to take four months to complete delivery.

Union Lumber Co.
Limited

White Pine
Red Pine
Spruce
Red and Jack Pine
Lath

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

—if you buy cheap, low-grade tea you are practicing false economy.

The advantages in favour of *good* tea are

Greater number of cups to the pound.
Real flavour.
Satisfaction instead of dissatisfaction.

"SALADA" TEA

is the finest quality Ceylon and Indian Tea that will yield generously and prove more economical in the long run than any cheap, low-priced tea.

The sealed moisture proof packets facilitate storage, transportation and stock inspection.

Many Lumber Camps and Mines favour us with their patronage for these advantages.

In any case write to us for samples and prices.

SALADA TEA CO.
TORONTO

Review of Current Trade Conditions

Ontario

Unquestionably the most important feature, and the most serious difficulty, connected with the lumber trade in Ontario to-day is the freight car shortage. Canadian railroads are refusing to permit their cars to carry lumber outside of Canada. This is tying things up at mill points to a great extent, because probably 50 per cent. of the lumber on order at the mills in Ontario to-day is for shipment to the United States, and it is almost impossible to obtain transportation for these orders. United States roads, moreover, will not permit their cars to come into Canada empty, and only the comparatively small number of them come here filled with steel and other goods urgently required are available. A few cars of this class are going across the line, but in most cases they are carrying more valuable freight than lumber. The situation is being discussed by all exporting lumbermen in Ontario, and the opinion is expressed freely that there should be a means of arranging for the interchange of cars under such conditions as those which prevail to-day. Such an arrangement would have to be brought about by co-operation between the Board of Railway Commissioners for Canada and the Interstate Commerce Commission. Ontario wholesalers are looking with envious eyes upon the markets of the Eastern States, where they could sell large quantities of lumber if it could be delivered, and where they expect that there will be a good demand for Canadian stock for a long time to come.

General conditions at present in the Eastern States, as reported by Ontario wholesalers who have recently been across the line, are very similar to those which prevailed in Ontario during the latter half of 1915. House-building has almost come to a standstill. The United States Government and the steel and munition plants are using large quantities of lumber, such as Ontario can supply, and will be using still greater quantities in the near future. Even the United States Government is finding it difficult, and in some cases impossible, to get delivery of material when they want it. The natural result will be that a large quantity of lumber now in the yards at manufacturing points throughout Eastern Canada cannot be completely delivered before next spring. This is a strong factor in making trade conditions in Ontario unsatisfactory at present.

Local trade in Ontario is fair. The country trade is showing a little life, not so much as during active seasons in former years, but more than that of several years, not long before the war. The manufacturers in Northern Ontario all seem to be going into the woods this winter to a greater or less extent. They are not figuring on getting out their usual supply, because of the uncertainty in connection with market conditions, the high cost and inefficiency of labor, and the advanced prices of equipment and supplies. This will undoubtedly result in a reduced output next summer, which will be one of the important factors to regulate next season's trade.

The improvement which commenced in the Ottawa lumber trade about the last week in September still continues, and has been assisted materially by orders for shell boxes which were placed a short time ago by the Imperial Munitions Board. These orders amount to somewhere between 60,000 and 75,000 boxes and are included in three contracts. The result is a great deal of activity among the plants where the boxes will be produced. Employment will thus be given to about 220 men. Unfortunately, however, it is the general opinion that the prices for these boxes are exceptionally close, permitting of practically no profit. Manufacturers and wholesalers are having trouble with transportation. The Grand Trunk Railway is refusing temporarily to allow its cars to go out of Canada. Such shipments as are being sent to the United States are going over the Ottawa and New York Railway and the Canadian Pacific, together with a few shipments on foreign cars over the Grand Trunk. The shortage of labor in the woods is affecting manufacturers greatly and there is a belief that the output during the coming winter will be reduced, possibly by fifty per cent. Moreover, the cost of operating will be abnormal on account of the high wages and the high prices that have to be paid for all kinds of supplies. Ottawa prices show no important changes, though hemlock is a shade easier. Spruce prices continue very firm. The demand for mill refuse is very strong on account of the increased price of coal.

Eastern Canada

The demand for shipbuilding timbers at Montreal continues very strong. The Imperial Munitions Board has been taking so much of this kind of stock, however, that private concerns are finding it difficult to obtain supplies. It is even reported that the Board intends to put in some of its own camps in British Columbia, in order to make sure of an ample supply. Manufacturers and wholesalers are unanimous in expecting higher prices on account of the labor difficulties and the high price of supplies. Building operations are very quiet. Trade with the United States is still extensive, though a slight reduction in orders is reported. Shipments to the United Kingdom and South Africa are very light. The freight quotation is 500 shillings per standard. Space is very scarce as the government is loading all vessels with food stuffs.

The demand for spruce at Boston is still good, and much of it is for war purposes. The building trade situation is still very dull and retail trade is, therefore, quiet. Prices on dimension are firm and unchanged. Random is unsettled. There is a good demand for all sizes of spruce at New York. Large government orders are still to come, and there are signs of an improvement in the building situation. Manufacturers are holding out firmly for prices sufficient to cover their increased operating costs. The government demand for hemlock is still large and prices remain firm. Eastern clipped hemlock boards are a little firmer. Hemlock prices are firm at New York, and stocks are hard to get. There is an improved building demand from outlying districts. No improvement is reported in the market for shingles and lath at Boston, as dwelling house construction is very quiet.

United States

The United States Government continues to order in great quantities materials required for the war, and the demand for lumber for this purpose is still very large. The trade, however, is not quite as satisfactory as it might be, on account of uncertainty as to the extent of the price-fixing plan of the government. There are several other features leading to uncertainty, such as the fuel shortage, the labor scarcity, the war tax, etc. Fundamental conditions, however, are generally conceded to be sound. Money can be obtained at reasonable rates for legitimate undertakings. The crop prospects are exceptionally encouraging and general business is fairly active.

The Southern pine business seems to be on a better footing than it was a short time ago. Orders are increasing, but shipments are not as large as they were. The car situation does not look any too encouraging, there being signs of an increased shortage. This may not be a great evil, however, and one advantage of it will be that it will help to put an end to transit shipments. The market for ship timbers is extremely active, and is calling for large quantities of prompt deliveries.

The latest order commandeering long leaf yellow pine lumber for shipbuilding purposes includes all stock with a face width of 12 in. or more and a length of 24 ft. or more. The original order included timber 30 ft. and over. This makes quite a change; it releases stock with a face width less than 12 in., but it ties up stock 12 in. and over, even though it be only 1 in. thick. A large quantity of stock suitable for railroad and general industrial work will be released.

Trade in Western pine is light. Manufacturers, however, believe that they are in a strong position, and so are standing pat. The car situation in the West is unsatisfactory. Prices in general are firm. Manufacturers are exercising much caution on account of the uncertainty connected with the cost of operation. Most of the orders for Douglas fir at present are for ship timbers, special cutting bills, and for the railroads. The retail trade is very quiet. Stocks suitable for retail business, however, are scarce.

The hardwood trade, though possibly not so active as a few weeks ago, is good, and shipments are being made at a fair rate. Stocks in the North are badly broken, and, although operators intend to take out as many logs as possible this winter, it does not look as though they will be able to obtain as much as they would like, because of the shortage of labor. For these reasons Northern stocks are very firm. Somewhat similar conditions prevail in the South. A few price concessions are reported, though they are not of an important nature. This is probably the result of the greater number of small Southern firms with comparatively limited financial support. The market for Southern stocks, however, may be considered to be a good one, particularly for those who are able to go after and obtain business resulting out of the war.

Great Britain

London importers are practically at an end of their importing business, and have almost nothing of this nature to do, except to close out such transactions as are not yet completed. Firms which have gone in for the trade in home timbers, however, are fairly busy, particularly on account of the difficulties they experience in getting ship-

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Gorf, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

ment by the railways. Dock stocks, compared with those of former years, are considerably reduced, but, on account of the small demand, are probably sufficient to last until the reopening of navigation. There are fairly large quantities of mill-sawn and planed boards.

Imports of spruce deals at Liverpool during September amounted only to 200 standards, as compared with 6,240 standards in 1916. The stock at Liverpool on the first of October was only one-sixth of what it was a year previous, viz., 2,430 standards, as compared with 14,610 standards. Consumption shows a great decline, 40 standards having been used during September, as compared with 2,770 standards in September, 1916. There is no change to report in the general spruce market. New business is practically impossible under present conditions. The only subject of discussion is whether this situation can continue without starving the national requirements. On account of the great uncertainty which importers have to face, they are not able to give any consideration whatever at present to 1918 operations. Buying f.o.b. would be simply a gamble, according to the opinion of most importers, particularly in view of the increased figures that Canadian shippers are talking about, and which are the outcome of increased operating costs. The outlook is so uncertain that shippers do not care to commit themselves at present, as they are not able to foresee the extent of operations during the coming winter.

Manchester importers are giving a good deal of thought to the latest restriction on the export of all classes of goods to Sweden, Norway, etc. It is thought that his will have a far-reaching effect upon the timber trade. If no goods are exported, it is to be expected that no wood goods will come from those countries, and also that the rate of exchange will grow worse. This would be quite a serious thing for the Manchester timber trade, particularly as no goods are coming from Canada and other sources. Therefore, they are hoping that this restriction will not be maintained for long.

Business at Glasgow is quiet, and one week seems to be practically the same as those which preceded it. A few small parcels of spruce and pine have recently arrived from Montreal, but in the aggregate they do not amount to much, and practically do not relieve the great needs of the market. A fair enquiry is reported for spruce deals on c.i.f. terms, but it seems impossible to arrange for freight and insurance. Under present shipping conditions, it does not look as though stocks ready for shipment at Canadian ports will be sent across in any volume worth mentioning. The government is holding very considerable stocks and probably does not care to encourage competition.

Such transactions in pine as are reported are confined to small quantities from merchants' stocks, chiefly all third and fourth quality deals for shipbuilding and engineering purposes, but stocks of this kind all are low. The demand for Pacific Coast clear spruce for airplanes continues very strong, and such odd lots as come upon the market are quickly bought up, suitable specifications bringing high prices.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Ottawa Trade More Active—New Shell Box Orders

Ottawa, Oct. 25.—(Special correspondence to the Canada Lumberman.)—A little more firmness has been noticed in the Ottawa lumber market during the past fortnight. The improvement commenced late in September, and the trade generally, so far as sales are concerned, appears to be good, with fair prospects. With the mills, however, the outlook is not so encouraging. The labor situation in connection with woods operations is becoming more and more difficult.

Transportation problems are giving the trade more trouble than formerly. Stocks for export to the United States have not been moving as freely as they were a short time ago. This is partly the result of the Grand Trunk Railway refusing, for the time being, to allow its cars to go out of Canada. The Grand Trunk explains that it is concentrating upon government business. Some shipments of lumber are reported from Ottawa to United States destinations over the Ottawa and New York Railway and the Canadian Pacific Railway. Shipments are also reported of foreign cars over the Grand Trunk line.

On account of the shortage of labor for woods operations a number of the mills will be obliged to reduce their cut. Two of the mills regarding which enquiry was made will reduce their cut by 50 per cent. The calling to the colors of the first draft under the Military Service Act is expected to reduce the supply of labor still further. At present there seems to be sufficient labor for the mills that are located at Ottawa. Enquiry leads to the belief that very few of the mills will file exemption claims on behalf of their employees.

The most important feature in connection with the manufacturing and woodworking plants, aside from the labor and transportation questions, has been the renewal of the orders for shell boxes. Three Ottawa plants have obtained new shell box contracts, the Estate of James Davidson receiving two orders for a total of 45,000 shell boxes, 35,000 of which are to be 6 in. shells and 10,000 4.5 in. shells. It is expected that these orders will keep the plant running until nearly Christmas and will give employment to about 100 men. This firm reports that there is not much demand for building materials, and that the trade in ordinary boxes for commercial uses is not sufficient to keep the plant operating to capacity. In its woods operations the Estate of James Davidson still require about fifty men. So far, in spite of the shortage of labor, this company have made satisfactory progress in their logging.

W. C. Edwards & Co. report that trade with the United States is continuing satisfactorily, although they are experiencing a good deal of trouble in connection with transportation. This company reports that the labor situation in the woods is very unsatisfactory. Their camps have not all been established as yet, and operations in the woods are behind time. Unless the situation improves, the company may not get out more than 50 per cent. of their cut of last season. The company is now finishing up some shell box orders, and has not received new ones.

The McAuliffe-Davis Lumber Company were among those who obtained new shell box orders, and they report that the market generally is steady. Their shell box operations will give employment to about twenty men.

J. Oliver & Sons, furniture manufacturers, who also obtained a new shell box order, will employ about 100 men on this branch of their work. Their factory is operating to capacity on furniture and shell boxes.

The Hawkesbury Lumber Company report that the supply of labor in the woods is only about half as large as it was a year ago.

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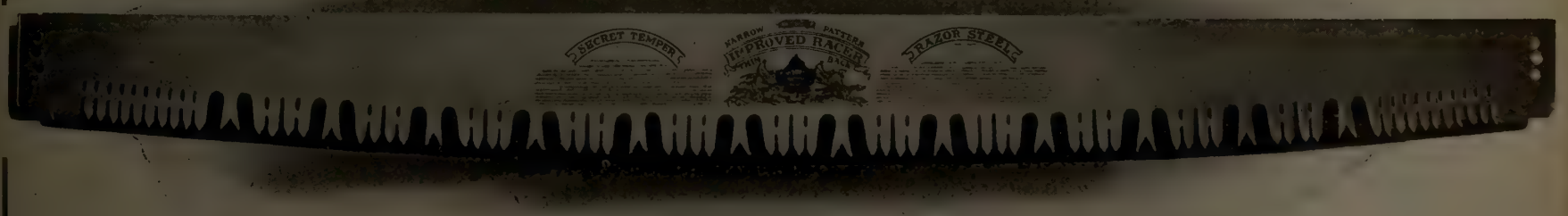

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Mr. Jackson C. Booth reports that the cut of John R. Booth during the coming winter cannot yet be estimated, but that he does not think any of the lumbermen will be able to get out as much as they did last year, as the necessary labor is not available. He attributes the labor shortage chiefly to the enlistment of woodsmen in railway and forestry battalions.

Three contracts containing four orders for a total of between 55,000 and 75,000 boxes have been given to Ottawa manufacuring and woodworking plants by the Imperial Munitions Board. The price on these contracts is very close. This new business will give employment to about 220 men. It is stated by people who are in close touch with the situation that the future of the shell box and munition manufacturing industry in Canada will depend more or less upon the success of the new Canadian war loan.

Prices are unchanged for good pine sidings, strips, and shorts. Although there does not seem to have been any definite change in pine prices generally, there is apparently a somewhat wider range between the low and high prices which one hears quoted. Spruce prices have continued firm, with a tendency to advance. One inch cull hemlock is easier. Lath also are easier. This is the result of the falling off in Canadian and United States building operations. Shingles show no change. In general, there is a fairly steady market, such alterations as are reported being of an unimportant nature and due to more or less momentary or local conditions. There is a great demand for mill refuse and cuttings for domestic fuel. On account of reduced mill operations this season the supply of fuel wood is not adequate to meet the demand, which has been all the more active on account of the increased price of coal.

St. John Mills Short of Logs

St. John, N.B., Oct. 26.—(Special to the Canada Lumberman.)—The last two weeks have seen positively no change in the lumber market at St. John. Stocks are not moving out any more actively than they were. There has been no reduction in prices, and the American demand has not shown any slackening. The only trouble is want of cars to move the material. This phase has not shown any improvement, and will not until the opening of the winter port, when many cars will come to hand loaded and will need refilling for their trip back to the United States. Only Stetson, Cutler & Co. and Murray & Gregory are now sawing at St. John. The other mills have shut down for want of logs. Men for the woods are extremely scarce, and it looks as if the cut must be very much reduced this winter. Logs are in good demand, at high prices never before offered, but, even at these prices, very few are being offered.

Montreal Markets—Ship Timbers the Chief Factor

Montreal, Oct. 26.—(Special correspondence of the Canada Lumberman.)—The situation has not appreciably changed. The demand for shipbuilding purposes is still very good, although it is not so insistent as a month ago. British Columbia timber continues to be the chief requirement, and with the British Columbia shipbuilding program in full swing there is little to spare for the East. The Imperial Munitions Board have set specified prices which they are prepared to pay, but the mills are so crowded with orders that the latter are demanding a premium of $5 per 1,000 for other shipments. A Montreal wholesaler who has just returned from the West states that the mills have all the business they can handle, and that Americans are bidding very briskly for any supplies that are available. The Imperial Munitions Board are putting in their own camps, and there is also the chance that they will commandeer a certain number of mills. Outside of timber there is very little demand for British Columbia wood.

Generally speaking, the opinion is that prices will go higher, not only on account of the smaller cut, but because of the increase in wages and in prices of commodities. There is, of course, the possibility of a serious decrease in the demand. With everything pointing, however, to buying on a fair scale, under the influence of war conditions, the chances are favorable to a still higher level of values. There is no reason to expect any revival in building locally, as builders state that the prices do not warrant extensive investments in bricks and mortar. The Builders' Exchange has under consideration means to reduce the cost of supplies, but it is questionable whether there is any hope of lower prices. Certainly in the matter of lumber the outlook is all the other way.

Trade with the United States is satisfactory, although a slight reduction in orders is reported.

Only a very small amount of lumber is going to the United Kingdom and South Africa. The freight quotation is 500s. per standard. More lumber would be sent were space available, but the government are loading up vessels with foodstuffs.

Sulphite is in good demand, while prices are lower as compared with the very high range recently obtained. Owing to importations from Sweden, the English market had a sharp drop. These imports have now ceased and quotations are stronger. A considerable amount of this pulp has been sent from Canada.

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MONTREAL

The Norwegian Pulp Market

A recent number of the Norwegian trade paper Farmand refers to the pulp market in the following words:

"Business in paper is very slow, with a great scarcity of orders. A crisis is imminent in the Norwegian cellulose industry. It is believed here that the Swedish Government has agreed to give licenses for the export to the United Kingdom of 120,000 tons of cellulose, and some surprise is expressed that shipments have not yet actually commenced. The British market appears, on the other hand, to have been very liberally supplied with Canadian and American chemical pulp, as our correspondents in London report. As a result there is presently hardly any demand from the United Kingdom, and, in any case, buyers expect Norwegian sellers to make very heavy price reductions. Owing to the enormously increased cost of production, to a great extent a result of the high coal freights, the Norwegian cellulose mills cannot go down to the somewhat enhanced Swedish level of prices without actually losing much money on each ton. Under these circumstances the market here for cellulose is at present quite in suspense, and no fresh business has yet been reported by which the value might be tested.

"The makers in this country of mechanical wood-pulp are not much better off than their colleagues in the other branch of the pulp trade. The absence of sufficient orders has gradually tended to a weakening of the current price to $16 f.o.b. This figure would have left a splendid profit in pre-war times, but, owing to the excessive cost to which logs have arisen and a general advance of all expenses, it is doubtful if the mills can make both ends meet with this price, particularly on a greatly reduced output. In order to prevent stocks from accumulating too much the mills belonging to the Wood-Pulp Association have agreed upon a very considerable reduction of the production.

"The wages tariffs for the Norwegian paper, cellulose, and mechanical wood-pulp mills have expired. The employers have made important concessions—the three-shift and additional war allowance—but these have been rejected by the men, and one must be prepared for the eventuality that the workpeople may be infatuated enough to carry the conflict to extremes, although the mills are already seriously considering the question of a temporary stoppage until market conditions improve somewhat.

"The outlook for the Swedish cellulose trade is not good. Apart from the uncertainty as to the embargo, it is highly doubtful whether it will be possible to get pulp from the Baltic shipped, and, like most of the Swedish industries, the cellulose mills suffer from want of raw materials, lubricating oils, etc."

An interesting reference to the sulphite pulp situation in Sweden is contained in a recent number of the "Paper Maker," in which Mr. S. C. Phillips writes as follows:

"I have always maintained that Sweden would have to abandon her hostile attitude towards this country, especially as soon as she was sure that Germany could not win the war.

"She views with alarm the great preparations Canada is making to capture a big amount of the sulphite pulp business over here, and that in itself has proved one of the strongest factors in bringing her into line. Sweden knows full well that so long as the war continues German can take an abnormal quantity of sulphite pulp for munitions at fancy prices from her; yet, when normal times come round again, she would need her old markets very badly, particularly if Canadian business developed, as it is threatening to do just now.

"Then, of course, Germany's cutting down of essential supplies to Sweden, such as coal, chemicals, etc., in exchange for various commodities she was so badly in want of, has opened her eyes wide to the selfishness of the Germans, and common sense, plus the instinct of self-preservation, has brought about a change of front which will naturally best serve the interests of the Swedes.

"In return for the removal of the embargo Sweden will get a certain amount of coal and other essentials, including food, she so badly wants now.

"The consequences of the removal of the embargo on sulphite wood-pulp from Sweden to this country is that wood-pulp prices were going down with a bang. In fact, the market is demoralized. Prices have declined from £50 to £35.

"Judging from reports which reach me from Sweden, the Swedish sulphite makers have got a very bad fright over the Canadian competition, and they have determined upon a strenuous attempt to smash the Canadian sulphite pulp trade at all costs; but in this the Canadians assure me that the Swedes will find themselves up against a very hard and difficult proposition.

"The whole top and bottom of the matter is that the Swedes have misjudged us all through this war. They have badly miscalculated the strength of the Allies, and have at last realized that they have had their money on the wrong horse. They find they have been backing the loser all through.

"Let Sweden frankly acknowledge her error and we shall be better and firmer friends."

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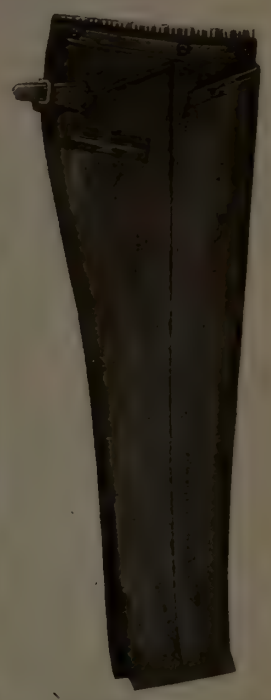

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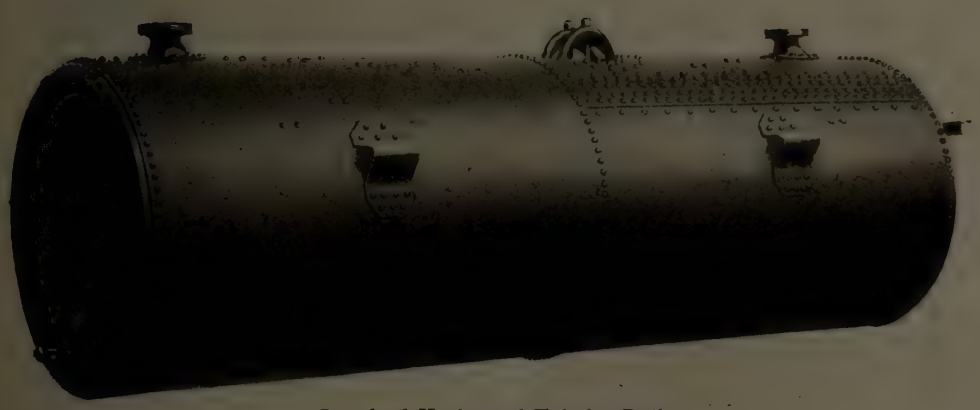

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EDGINGS

Ontario

Work is about to start on alterations and addition to the mill of McLachlin Brothers, Arnprior, Ont. New machinery will be required for the lath mill.

The Northumberland Paper and Electric Company, River Front, Campbellford, Ont., recently lost their plant and mill by fire. The loss was fully covered by insurance.

Erickson & Co., Grand Marais, Ont., will take out between 10,000 and 15,000 cords of pulpwood during the coming winter on Edwards Island, which is east of Thunder Cape.

The plant of the Mattagami Pulp and Paper Company at Smooth Rock Falls, on the Mattagami River, has been completed and is ready for operation. The turbines have been tested and the installation is considered a successful one.

Mr. J. J. Carrick, M.P., Port Arthur, Ont., reports that erection of the pulp and paper mill which is to be located at Port Arthur in connection with the Black Sturgeon limits, recently purchased from the Ontario Government, will be commenced shortly.

The Ontario-Quebec Pulpwood Company, Ltd., has been incorporated, with head office at Toronto, Ont., and capital stock of $40,000, to carry on business as dealers in pulpwood, wood pulp, timber, etc., and as lumbermen, manufacturers of lumber, ties, lath, and shingles.

The Abitibi Paper Company announce that their pulp output has been doubled as the result of the completion of the new mill. In place of 65 tons a day, the sulphite plant is now turning out 130 tons a day, while at the same time the company's capacity of ground wood pulp has been increased to 300 tons daily.

The Bethune Pulp and Lumber Company, Ltd., has been incorporated, with head office at Toronto, Ont., and capital stock of $50,000, to carry on business as timber merchants, timber growers, saw millers, pulp and paper millers, etc. The provisional directors are J. L. Ross, A. W. Holmested, and L. B. Campbell, 20 King Street East, Toronto.

The Peterboro Lumber Company's extensive planing mill at Peterboro, Ont., was recently destroyed by fire. The company was running its plant overtime to meet with a heavy demand for material. It is believed that the fire originated from wire trouble in the motor room. The company have secured another mill for temporary use, and will be able to continue their business as usual. The loss was partly covered by insurance. It is understood that the mill will be rebuilt at once.

The Spruce Falls Pulp and Paper Company, Ltd., have been incorporated, with head office at Spruce Falls, Ont., and capital stock of $3,5000,000, to carry on business as manufacturers of and dealers in pulpwood, wood pulp, etc., and to operate pulp and paper mills, sawmills, and to carry on business as general lumbermen. The provisional directors are T. H. Barton, C. M. Garvey, T. M. Weatherhead, and A. V. Waters. Barton & Henderson, 904 Royal Bank Building, Toronto, Ont., are solicitors for the company.

Keenan Brothers, Owen Sound, Ont., are erecting a new building, which is now ready for roofing. The dimensions are 63 x 133 feet. The building is three storeys high, with an addition on the north end for office, elevator, etc. The addition is 70 feet long and 20 feet wide, three storeys high. The building is of mill construction, with 12 x 12 in. posts on the first floor and 12 x 14 in. beams. On the second floor the beams are 12 x 12 in., and one the third floor 10 x 12 in., with 10 x 10 in. posts. The lower floor is 2 in. hard maple, covered with 1 in. maple flooring. The upper floors are 3 in. Southern pine, covered with 1 in. maple flooring.

The Ballantyne Lumber Company, Trout Creek, Ont., have sold their limits in Ballantyne Township to Jacob Kaufman and Trussler Brothers, of Trout Creek, Ont. Edward Clark & Sons, Toronto, and Kelly Brothers, Bridgenorth, Ont., have sold all their interests in the Trout Creek Logging Company and the Dominion Wood and Lumber Company, Trout Creek, Ont., to Trussler Brothers, & Kaufman, Trout Creek. It is expected that the interests of the Ballantyne Lumber Company and the Trout Creek Logging Company will be combined in one company by the new purchasers, under the name of the Dominion Wood and Lumber Company. The former Ballantyne Lumber Company have reserved the 1917 cut of logs, and are now having them sawn at Trout Creek by the Dominion Wood and Lumber Company. These consist of about 2,500,000 feet of white pine.

Eastern Canada

The Canadian Franco Pulpwood Company, Montreal, P.Q., has been registered.

Bray & Gareau, Montreal, P.Q., have been registered. N. Bray and J. H. Gareau are interested.

The James Buchanan Lumber Company, Montreal, P.Q., has been registered. James Buchanan is interested.

Mr. J. A. Gregory, Grand Bay, N.B. (St. John River) is contemplating building a large tern schooner near his mill.

Fred J. Argall, 32 Des Forges Street, Three Rivers, P.Q., is making arrangements to organize a wooden shipbuilding company at Three Rivers.

Burns & Keller, Hailfax, N.S., are preparing to build a 500-ton schooner at Bayside, N.S., and it is expected that other vessels will be built subsequently.

The International Shipbuilding Corporation, Nordin, N.B., have begun work upon a plant for the construction of wooden vessels. The first keel will be laid in the near future.

The Comeau Shipbuilding Company, Ltd., Comeauvile, N.S., are contemplating the erection of a shipbuilding plant. J. W. Comeau is president and E. L. Comeau is secretary-treasurer.

Mr. D. Huntley, Parrsboro, N.S., has received a contract to build a schooner of 600 tons net on a 10 per cent. basis. The vessel will be built at Scott Bay, King County, during the winter.

A large stock of pine and spruce belonging to P. A. A. Dufresne & Frere, Ontario Street Montreal, was destroyed by fire on October 24. Fortunately only the front portion of the yards was affected.

Mr. R. E. Harris, Main St., Wolfville, N.S., is arranging to install a shipyard at that place. Old shipyard property has been secured on the east side of the creek, and work will start as soon as possible.

Fraser-Brace & Co., 83 Craig Street West, Montreal, are commencing work on the construction of a sawmill, shed, and blacksmith shop, at a cost of $7,500. The company have important contracts for wooden shipbuilding.

Rafuse Brothers, Bridgewater, N.S., have purchased the premises and yard of the estate of J. McGill, Shelburne, N.S., and intend to install a shipyard at that place. They are also associated with Messrs. Foley, Salmon River, in building ships.

The Acadian Shipbuilding Company, Ltd., are contemplating the erection of a shipbuilding plant at Saulnierville, N.S. The president is F. E. Comeau; manager, E. P. Comeau, and secretary-treasurer, D. D'Entremont, Meteghan River, N.S. Work preparatory to building has commenced.

Veneers and Panels, Ltd., with a capital of $500,000, are constructing, at St. Jerome, P.Q., a factory for the manufacture of veneers from Canadian hardwoods, including birch, maple, elm, beech, ash, and also basswood. The company, of which Mr. H. Lefeber is manager, hope to have the plant ready in the spring.

La Manufacture de Seaux et Boites de Trois-Rivieres, Ltd., has been formed, with a capital of $99,000, to manufacture and deal in lumber, logs, pulpwood, wood pulp, shingles, and paper; to manufacture and deal in pails, barrels, and boxes of all kinds; to acquire and operate mills; and to hold and operate timber cuts and limits. Messrs. L. Gilbert and O. Gilbert, D'Israeli; Lionel Trudel, Montreal; N. Chenevert and T. A. Gilbert, Cap de la Madeleine, are interested.

Western Canada

The McDonald-Dare Lumber Company, Ltd., Winnipeg, Man., recently suffered loss by fire.

The Barr Springate Lumber Company, Ltd., has been incorporated, with head office at Shaunavon, Sask., and capital stock of $100,000.

The Dome Creek Lumber Company, Ltd., has been incorporated, with capital stock of $15,000 and head office at Dome Creek, B.C., to carry on business as lumber merchants, sawmill proprietors, timber growers, etc.

The Alexa Lake Mills, Ltd., have been incorporated, with head office at Aleza Lake, B.C., and capital stock of $25,000, to carry on business as timber merchants, sawmill proprietors, lumbermen, and shingle manufacturers, etc.

The Smith-Dollar Timber Company, Ltd., has been incorporated, with head office at Vancouver, B.C., and capital stock of $50,000, to carry on business as manufacturers of and dealers in lumber and shingles, shingle mill and sawmill owners, loggers and lumber merchants.

The Mankin Lumber and Pole Company, Ltd., has been incorporated, with head office at Hall, B.C., and capital stock of $100,000, to purchase and operate the sawmilling and lumber and pole business, plant, etc., of the Mankin Lumber and Pole Company. The new company will also carry on business as timber and lumber merchants, sawmill proprietors, and pulp manufacturers.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 28th day of November, 1917, for the purchase of License X361, to cut 6,290,000 feet of Douglas fir, hemlock, cedar, and spruce on an area situated on Agamemnon Channel, N.W.D. Three years will be allowed for the removal of the timber. Further particulars may be obtained from the Chief Forester, Victoria, B.C.

Mr. Gustave Ste. Marie, late chief clerk for the Redfern Lumber Company, Montreal, died on October 22. Mr. Ste. Marie, who retired a few months ago, was connected with the firm for thirty-four years.

Major Austin Taylor, of the Montreal Locomotive Works, has been appointed by the Imperial Munitions Board director of aeronautic supplies in British Columbia. This is particularly in connection with a supply of suitable spruce for aeroplanes in Canada and Great Britain.

Wholesale Lumber

The
McLennan Lumber Co.
Limited
MONTREAL, QUE.

The Bennett Lumber Co.
Limited
Solicit your kind enquiries for
Spruce, Pine and Birch
in all grades and thicknesses

American Hardwoods and Mahogany

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Long Distance Phone Main 812

H. BOURGOUIN
Dominion Express Bldg., 145 St. James St., Montreal
WHOLESALE LUMBER AND TIMBER
Dressed and Rough
White and Red Pine, Spruce, Hemlock, Banksian Pine, Birch, Maple, Dimension Cedar, B. C. Fir, Yellow Pine, Railway Ties, Fence Posts, etc.
Prompt shipment. Satisfactory stock. Good service Write for Prices.
A. F. B. AUSTIN, Manager

Install a "By-Pass" Exhauster
in your Saw Mill, Planing Mill or Plant

Our "By-Pass" Exhaust systems save your power and give better service. They handle green sawdust or wet, stringy material that usually clogs up an ordinary Blower system. The fan wheel is not overhung. No heating, clogging, or shaking. Three bearings.

Write for information.

We manufacture and install systems complete.

Toronto Blower Company
156 Duke St., Toronto

Canada is Now a Creditor Nation

Help Her to Maintain this Position By Subscribing for Large Blocks of

Canada's Victory Bonds

It is for you, manufacturers and merchants, to give the lead to those whose daily lives you influence, by subscribing for a substantial block of Canada's Victory Bonds.

The simple fact is, Canada must have more money to carry on her part in the war and extend credit to Great Britain and our Allies.

This Canada must do if our industrial, commercial and agricultural activity is to be maintained.

Since Canada can no longer borrow abroad, the money must be secured here.

Fortunately the money is here. It only remains to get the hundreds of thousands of people with savings to realize what it means to Canada—to them—to you—to insure the success of the Loan.

By subscribing for Canada's Victory Bonds yourself, and tactfully explaining their merits to your employees—you can insure the Bond issue becoming an overwhelming popular success. This Canada relies upon you and every other manufacturer and merchant to do.

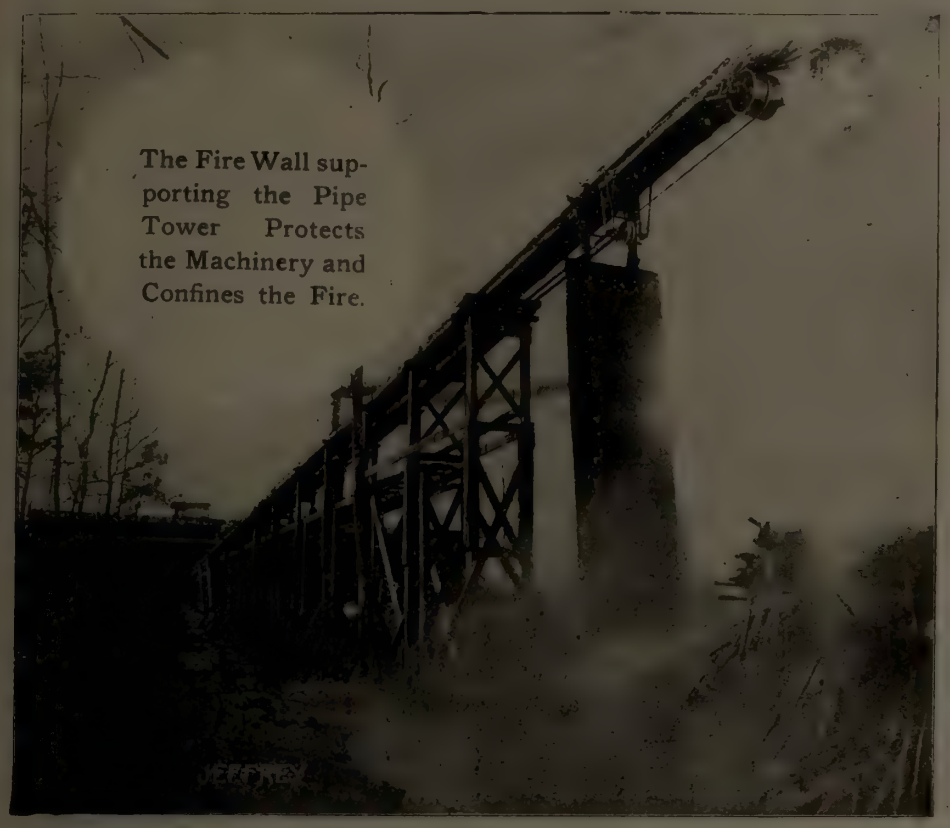
So surely as Canada's Soldiers in the Front line trenches are fighting for Freedom, so in a lesser degree do they fight who lend their money to support Canada's Armies in the field.

Money fights to-day, and it is the bounden duty of every Canadian to back Canada's part in the war by buying Canada's Victory Bonds.

Decide now that your concern will take a big block of Canada's Victory Bonds and that your whole establishment will be organized in support of the Loan.

Issued by Canada's Victory Loan Committee in co-operation with the Minister of Finance of the Dominion of Canada.

90



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REFUSE CONVEYERS
Are Cheap Insurance

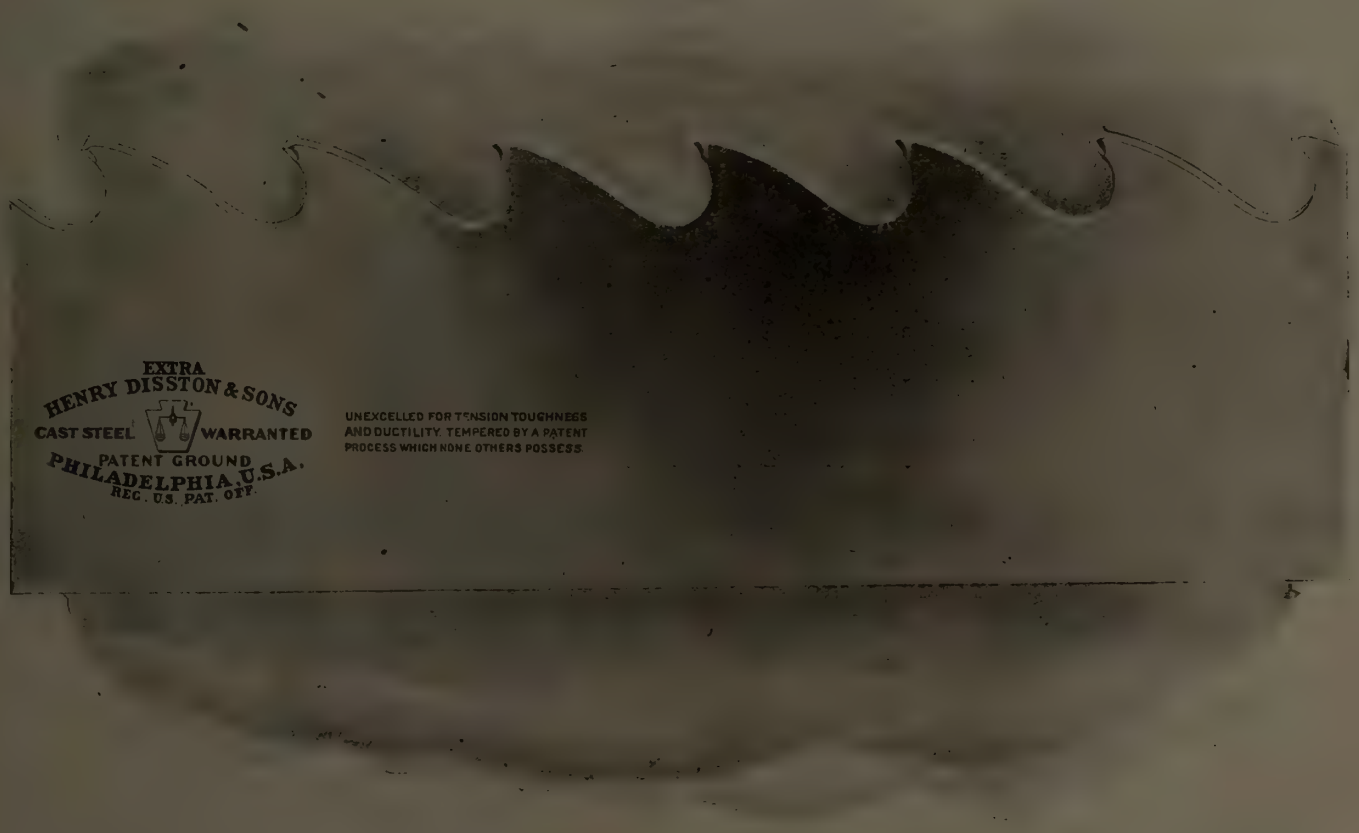
Protect your plant by installing one of these Conveyers to carry your Cuttings, Slabs and Saw Dust far away from the Mill to a wall protected fire pit

They are a necessity to mills of large capacity and are becoming more and more an indispensable accessory to mills of smaller capacity.

Send for Catalog on our complete line of Conveying Equipment for handling Refuse, Logs, Lumber, etc.

The Jeffrey Manufacturing Company, Canadian Branch and Warerooms, MONTREAL

Headquarters for Dependable Chains, Sprockets, Buckets, Gears, Hangers, Bearings, etc.



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We specialize in Mixed Cars for IMMEDIATE USE or WINTER STORAGE. Let us give you figures of your requirements. Get in touch with us. We can save you money.

DUNCAN'S LIMITED

Wholesale Fruit, Produce and Commission Merchants

NORTH BAY, SUDBURY, COBALT

SERVICE

a Specialty — not a side Line

BAND RESAWS

Saginaw Seven-Foot Band Resaw

Charleston, S C.,
July 17, 1917.

Gentlemen:

Your letter of the 13th in regard to our Saginaw Sawmill Resaw received. The saw, ***now sixteen years in service,*** is giving us good satisfaction and we cannot see but what it is turning out as good lumber as any new machine.

At this time we would not care to make any change.

Yours very truly,

The North State Lumber Co.

Wm. B. Mershon & Company

Saginaw, Michigan

McClary's Algoma Steel Ranges

For Wood or Coal

Constructed Specially for

Railroad, Mining Camps and other Heavy Work

No.	Size of Oven	Size of Cooking Surface	Length of Fire Box	Shipping Weight
516	16 x 27 x 15½	28 x 46	28½	325
525	24¾ x 27¼ x 16	28 x 54½	28½	462
535	35 x 27 x 15½	28 x 65	28½	565

McClary's Camp Comfort

For Burning Wood

"A Sturdy Heater for Camps"

Steel Body with Cast Legs, Door and Frame

Nos.	Dia. in Inches	Length in Inches	Shipping Wt.
36	22	36	175
42	22	42	212
52	22	52	230

McClary's

London, Toronto, Montreal, Winnipeg, Vancouver, St. John, N.B.
Hamilton, Calgary, Edmonton

SAW MILL LINK-BELT

MADE IN CANADA

SHREWD mill men who look for dependable service from the Link-Belt they use demand the Link-Belt for elevating, conveying or transmission work, which has this trade-mark ><———< on every link. It is a guarantee of reliability. Look for it—Demand it.

Write for catalog No. 260 for full particulars and prices.

CANADIAN LINK-BELT CO., LTD.

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Seattle: Link-Belt Co. of Washington, 576 First Ave. South.

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Trap Chains with L-V-L's
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Log Chains
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Drop Forged

Rope Dogs
Lumber Eye Dogs
Accessory Chain Forgings
COMMERCIAL and SPECIAL Drop Forgings
Car and Locomotive Forgings

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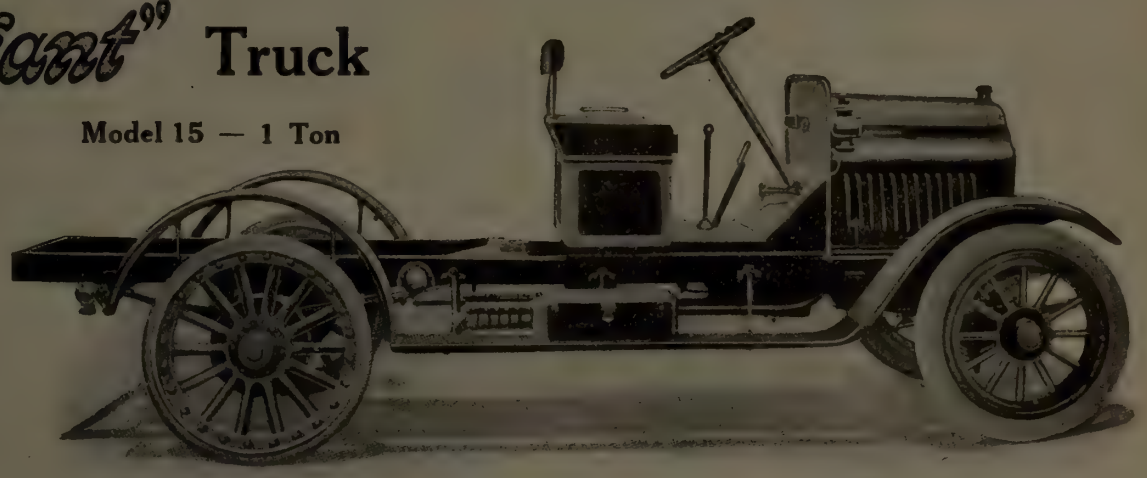
QUALITY AND SERVICE OUR MOTTO

James McKay Co.

Pittsburgh, Penna., U.S.A.

The "Little Giant" Truck

Model 15 — 1 Ton



The Little Giant is without doubt the most logical motor truck for your business.

Highly standardized—perfectly equipped — built to withstand maximum wear and tear — this car stands for real delivery efficiency.

Note in particular the exclusive feature which will save you 50 per cent. in fuel.

Special Features

Timken Worm Drive
Continental Motor
Schebler Carburetor
Ross Irreversible Steering Gear
Eisemann High Tension Magneto

The DUNTLEY Hydro-Pneumatic Gas Generator is an exclusive feature of Little Giant Motor Trucks. With this device the Little Giant Truck may be operated on a mixture of one-half kerosene and one-half gasoline, at a saving in fuel cost of over 50 per cent., with a total absence of carbon, smoke or odor.

Standard Models

"H 4"—1½ tons Chain Drive
"15" — 1 ton Worm Drive
"16" — 2 tons Worm Drive
"17"—3½ tons Worm Drive
"18"—5 tons Worm or Chain Drive to order

SELLING AGENTS

Canadian Pneumatic Tool Co., Limited

GEORGE J. SHEPPARD, Vice-President and Manager

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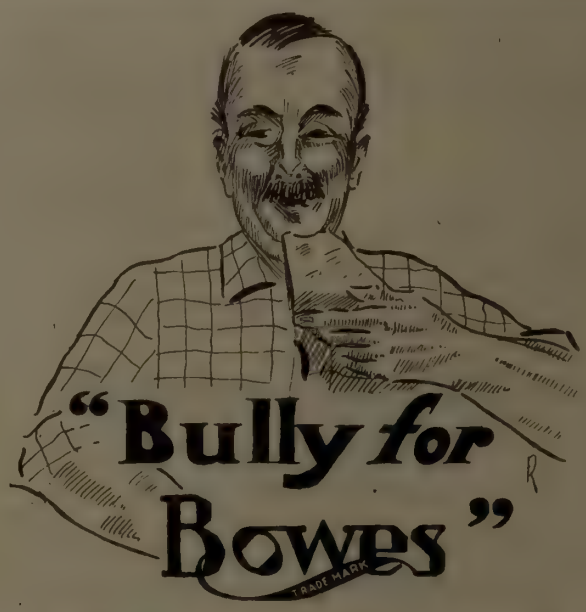
MONTREAL
379 Craig Street West

BRANCH: TORONTO
107 Church Street



LUMBERMEN WORK ON THEIR STOMACHS

What we mean is that they work better if well fed than they do if poorly nourished. Of course you realize this and you also realize the advisability of keeping your expenses down.

By making your food purchases from us you can feed your men on the best at the least possible expenditure.

We are quoting you on a few items here and would be glad to give you prices on any of our other lines.

BOWES STANDARD QUALITY MINCE MEAT

12 lb. pails—net weight, per lb.	13c
28 lb. pails—net weight, per lb.	12c
65 lb. tubs—net weight, per lb.	11¾c
In barrels about 500 lbs., per lb.	11½c

BOWES WORCESTERSHIRE SAUCE

6 oz., packed 3 doz. to crate, per doz.	$1.35
12 oz., packed 3 doz. to crate, per doz.	$2.00
Jugs, Imperial Gallon ..... per gal.	$1.20

BOWES JAMS AND JELLIES

Fig and Apple Jam, per lb.	.08½c
Fig and Lemon Jam, per lb.	.08½c
Compound Jam, specially good, always uniform, any flavor, per lb.	.12c
Bakers' Special Jam, extra heavy blend. In any flavor, per lb.	.13c

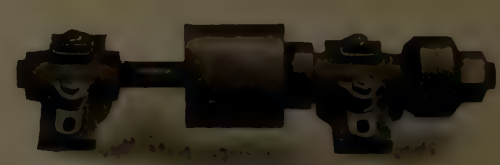
Our other lines are—

Maple Syrup, Table Syrup, Baking Powder, Butter, Eggs and Egg Products, Cheese, Canned Fruits, Figs, Raisins, Currants, Powdered and Condensed Milk, etc.

WRITE FOR PRICE LISTS

THE BOWES COMPANY, LTD.
Head Office—TORONTO, ONT.

"BOND" Saw Mandrels



BOND SAW MANDRELS are made of the best grade of steel. The bearings have ample oil reservoirs, and are babbitted, then reamed, thus assuring an even, true surfaced bearing throughout.

They are fitted in the most careful manner, and will run true and cool.

All BOND standard mandrels are made with pulley to the right of the collars and with left-hand threads. But we can furnish them with right-hand threads when so desired.

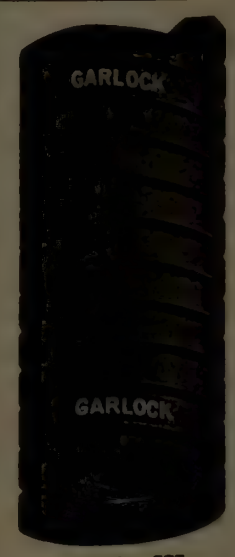
Saw is not included.

Larger sizes or special mandrels made to order. When ordering give length over all, and whether pulley is wanted to the right or left as saw runs toward you.

Canadian
Bond Hanger & Coupling Co., Ltd.
Alexandria, Ontario

Garlock Packings

Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.



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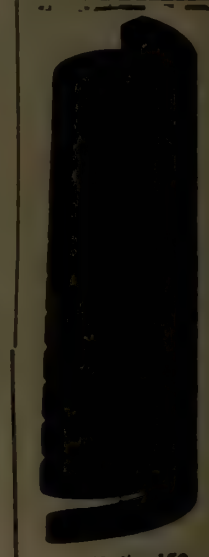
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The Garlock Packing Co.
Hamilton, Ontario

Branches: Calgary, Montreal

Branches: Toronto, Winnipeg

For Work in the Woods

Rough Roads and Heavy Loads soon reveal the quality of any equipment. The best that money can buy is the cheapest in the long run. Always consider quality first — strength, design, durability. For your requirements there is nothing better than

McKinnon Truss Rod

Whiffletrees, Neckyokes, Eveners and Four Horse Hitches

They are built for the heaviest kind ot work. The wood is clear, straight-grained stock of the toughest fibre. It is re-inforced by our patented steel Truss Rod which takes the overload and allows the wood to spring—no sore shoulders. Leading hardware and saddlery merchants carry them in stock.

McKINNON DASH COMPANY

St. Catharines - Ontario

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Logging Machinery

Will handle logs from the stump to the car or water more speedily and at a lower cost than man and horse power alone. Write us for particulars regarding our

Skidding Machinery ***Loading Engines*** ***Derricks and Derrick Irons*** ***Cars and Car Irons***

and other labor and money saving machinery for Lumbermen

MARSH & HENTHORN, Limited, BELLEVILLE, Ont.

A Good Belt Saves Money

THE money wasted in keeping a stretching belt taut amounts to a surprising figure. If you use "Goodhue Belts" in your mill or factory you can save most of this money because "Goodhue Belts" stretch less by 15 to 25 per cent. than any other belt. They are made from skillfully selected hides with the stretch taken out of each section before it is made up into the belt.

According to the conditions under which the belt is to run, we recommend "Extra," "Standard" or "Acme Waterproof" belts.

Send for further particulars and prices.

Winnipeg Agents—Bisset & Webb, Limited, 151 Notre Dame Ave. East, Winnipeg, Man.
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GOODHUE BELTS

J.L. GOODHUE & CO. Limited.

DANVILLE — QUEBEC.

YOU NEED "LITTLE DAVID"
FOR WOODEN SHIPBUILDING

— MORE WORK AND LESS WORRY —

The "Little David" Wood Borer is the "Shipbuilders' Wood Boring Machine," because it is light, powerful and speedy, and above all, simple and durable.

It is made in three sizes, the smallest boring holes in wood 1″ diameter and under, and the largest, 4″ diameter and under.

All sizes are reversible, and the cases are of aluminum with steel bushed cylinders. This explains why the largest size is about ten pounds lighter than any other wood borer of equal capacity.

We have other labor-savers for wooden ship work, such as the CC-101 Drift Bolt Driver, Pneumatic Hammers adapted for trenail driving, and Pneumatic Tools for horsing oakum, etc.

Our nearest branch will be glad to give you full information, and to send bulletins, etc., at any time.

CANADIAN INGERSOLL-RAND CO., Limited

COMMERCIAL UNION BUILDING, MONTREAL. CANADA

Works : SHERBROOKE, Que.

Branches: Sydney Toronto Cobalt Timmins Winnipeg Nelson Vancouver

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.
Car Lots

White Pine:

1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	62 00	64 00
2-in. No. 1 cuts and better	64 00	66 00
1½-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	52 00	54 00
4/4 No. 2 and 3 cuts		33 00
5/4 and 6/4 No. 2 and 3 cuts	42 00	44 00
8/4 No. 2 and 3 cuts	44 00	46 00
1-in. Good Shorts		45 00
1 x 4 and 5 com. and dressing	37 00	38 00
1 x 6 common and dressing	39 00	40 00
1 x 8 common and dressing	40 00	41 00
1 x 10 common and dressing	44 00	46 00
1 x 12 common and dressing	48 00	50 00
1 x 10 and 12 mill cull stocks	33 00	35 00
1-in. mill cull sidings	30 00	32 00
5/4 and 6/4 x 4 m.r., m.c. out.	38 00	40 00
5/4 and 6/4 x 5 m.r., m.c. out.	38 00	40 00
5/4 and 6/4 x 6 m.r., m.c. out.	39 00	41 00
5/4 and 6/4 x 8 m.r., m.c. out.	39 00	41 00
5/4 and 6/4 x 10 m.r., m.c. out.	45 00	47 00
5/4 and 6/4 x 12 m.r., m.c. out.	48 00	50 00
2 x 10 common	37 00	39 00
2 and 3 x 12 common	39 00	41 00
1 x 8 inch box and common	35 00	37 00
1 x 10 inch box and common	36 00	38 00
1 x 12 inch box and common	38 00	40 00
1-in. mill run sidings	40 00	42 00
1-in. mill run shorts	33 00	35 00
1-in. mill run Norway	31 00	32 00
2-in. mill run Norway	33 00	35 00
Norway, c. and cf. 1-in.	40 00	42 00
Norway, c. and cf. 1½-in.	42 00	44 00
Norway, c. and cf. 2-in.	42 00	44 00
Spruce mill run 1-in. and 2-in.	33 00	35 00
Spruce mill culls	28 00	30 00

Hemlock, No. 1:

1 x 4 and 5-in. x 9 to 16 ft.		27 00
1 x 6-in. x 9 to 16 ft.	30 00	31 00
1 x 8-in. x 9 to 16 ft.	32 00	33 00
1 x 10 and 12 in. x 9 to 16 ft.	32 00	33 00
1 x 7, 9 and 11 in. x 9 to 16 ft.	30 00	31 00
1 in. No. 2, 6-ft. to 16-ft.	24 00	25 00
2 x 4 to 12, 10 and 16 ft.	30 00	31 00
2 x 4 to 12 ft., 12 and 14 ft.	30 00	31 00
2 x 4 to 12 in., 18 ft.	32 00	33 00
2 x 4 to 12 in., 20 ft.	33 00	34 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	24 00	25 00
Clear in. B.C. cedar, kiln dried	50 00	55 00

Douglas Fir:

Dimension Timber up to 32 feet:

8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	43 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16	44 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.	44 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.	45 00
10x20, 18x20, up to 32 ft.	45 50
6x18, 8x18, up to 32 ft.	45 50
6x20, 8x20, up to 32 ft.	45 00

Timber in lengths over 32 feet subject to negotiation.

Fir flooring, 1 x 3, edge grain	43 50
Fir flooring, 1 x 4, edge grain	46 50
Fir flooring, 1 x 4, flat grain	39 50
No. 1 and 2, 1-in. clear Fir rough	50 75
No. 1 and 2, 1¼ and 1½ in., clear Fir rough	56 00
No. 1 and 2, 2-in. clear Fir rough	52 00
1½-in. No. 1, 4-ft. pine lath.	6 00
1½-in. No. 2 4-ft. lath	5 70
1½-in. 32-in. pine	2 75
1½-in. No. 1 4-ft. hemlock lath.	4 50
1½-in. mill run hemlock lath.	4 25
XX B. C. cedar shingles	3 05
XXX 6 butts to 2-in.	4 20
XXXXX	4 75

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2 in.		79 00
Ash, white, No. 1 common		55 00
Ash, brown, 1sts and 2nds, 4/4		60 00
Ash, brown, com. and bet.		48 00
Ash, brown, 1sts and 2nds, 6/4 and 8/4		68 00
Birch, 1st and 2nds, 4/4		58 00
Birch, No. 1 com. and bet., 4/4		47 00
Bich, 1st and 2nds, 6/4 and 8/4		64 00
Birch, 1st & 2nds, 10/4 and 12/4		74 00
Birch, 1st and 2nds, 16/4		82 00
Basswood, 1sts and 2nds, 4/4		51 00
Basswood, No. 1 com. and bet., 4/4	45 00	47 00
Basswood, No. 2 and 3 common		28 00
Basswood, 6/4 and 8/4, 1sts and 2nds	58 00	60 00
Basswood, 6/4 and 8/4, com, and bet.		53 00
Basswood, 4/4, No. 2 com. and bet.		42 00
Soft elm, 1sts and 2nds, 4/4		47 00
Soft Elm, No. 1 com. and bet., 4/4		43 00
Soft Elm, No. 2 and 3 common		24 00
Soft Elm, 6/4 and 8/4, 1 and 2		61 00
Rock Elm, 1sts and 2nds, 6/4 and 8/4		65 00
Rock Elm, No. 2 com. and bet., 6/4 and 8/4		45 00
Soft Maple, 1sts and 2nds, 4/4		48 00
Soft Maple, com. and bet., 4/4.		38 00
Soft Maple, 6/4 and 8/4, 1sts and 2nds		55 00
Hard Maple, 1sts and 2nds, 4/4		51 00
Hard Maple, com. and bet., 4/4		43 00
Hard Maple, 12/4, 1sts and 2nds	65 00	72 00
Hard Maple, 16/4, 1sts and 2nds	82 00	85 00

Red Oak, plain, 1sts and 2nds, 4/4		62 00
Red Oak, plain, No. 1 com., 4/4		42 00
Red Oak, plain, No. 2 com., 4/4		32 00
Red Oak, plain, 1sts and 2nds, 6/4 and 8/4		75 00
Red Oak, plain, 1sts and 2nds, 12/4 and 16/4	89 00	96 00
White Oak, plain, 1sts and 2nds, 4/4		62 00
White Oak, plain, No. 1 com., 4/4		42 00
White Oak, plain, No. 2 com., 4/4		32 00
Red and White Oak, plain, 1sts and 2nds, 5/4 and 6/4	69 00	71 00
Red and White Oak, plain, No. 1 com., 5/4 and 6/4		46 00
Red and White Oak, plain, No. 2 com., 5/4 and 6/4		35 00
Red and White Oak, plain, 1sts and 2nds, 8/4		76 00
Red and White Oak, plain, No. 1 com., 8/4		52 00
White Oak, plain, 1sts and 2nds, 12/4 and 16/4	89 00	96 00
White Oak, ¼ cut, 1sts and 2nds, 4/4		88 00
White Oak, ¼ cut, 5/4 and 6/4 1sts and 2nds		91 00
White Oak, ¼ cut, No. 1 com.		57 00
Hickory, 1sts and 2nds, 4/4		70 00
Hickory, 6/4, 1sts and 2nds		77 00
Hickory, 8/4, 1sts and 2nds		84 00

OTTAWA, ONT.
Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	60 00	70 00
1¼-in. and 1½-in. x 8-in. & up	70 00	75 00
2-in. x 7-in, and up	72 00	76 00
No. 2 cuts 2 x 8-in. and up	45 00	50 00
Pine good strips:		
1-in.	45 00	48 00
1¼-in. and 1½-in.	55 00	56 00
2-in.	56 00	57 00
Pine good shorts:		
1-in. x 7-in. and up	45 00	50 00
1-in. x 4-in. to 6-in.	32 00	36 00
1¼-in. and 1½-in.	53 00	55 00
2-in.	54 00	56 00
7-in. to 9-in. A sidings	30 00	34 00
Pine, No. 1 dressing sidings	42 00	47 00
Pine, No. 1 dressing strips	40 00	45 00
Pine, No. 1 dressing shorts		36 00
Pine, 1-in. x 4-in. s.c. strips	34 00	36 00
Pine, 1-in. x 5-in. s.c. strips	35 00	37 00
Pine, 1-in. x 6-in. s.c. strips		38 00
Pine, 1-in. x 7-in. s.c. strips		38 00
Pine, 1 x 8-in. s.c., 12 to 16 ft.	38 00	39 00
Pine, 1-in. x 10-in. M.R.	40 00	44 00
Pine, s.c. sidings, 1½ and 2-in.	38 00	42 00
Pine, s.c. strips 1-in.	34 00	35 00
1¼, 1½ and 2-in.	36 00	37 00
Pine, s.c. shorts, 1 x 4 to 6 in.	28 00	31 00
Pine, s.c. and bet., shorts 1 x 5	30 00	32 00
Pine, s.c. and bet. shorts, 1 x 6	31 00	33 00
Pine, s.c. shorts, 6'-11', 1"x 10"		36 00
Pine box boards:		
1"x 4" and up, 6'-11'	23 00	30 00
1"x 3", 12'-16'	26 00	28 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	28 00	30 00
and up, 6-ft. to 11-ft.	24 00	26 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.		25 00
O. culls r & w p	18 00	20 00
Red Pine, log run:		
mill culls out, 1-in.	28 00	30 00
mill culls out, 1¼-in.	32 00	33 00
mill culls out, 1½-in.	32 00	35 00
mill culls out, 2-in.	34 00	36 00
mill culls, white pine, 1"x 7" and up	30 00	32 00
Mill run Spruce:		
1"x 4" and up, 6' 11'	24 00	25 00
1"x 4" and up, 12'-16'		30 00
1"x 9"-10" and up, 12'-16'	36 00	38 00
1¼"x 7" 8-9" and up, 12'-16'		35 00
1¼"x 10" and up, 12'-16'	36 00	38 00
1½" & 2"x12" and up, 12'-16'		40 00
Spruce, 1-in. clear (fine dressing and B)	36 00	38 00
Hemlock, 1-in. cull	16 00	18 00
Hemlock, 1-in. log run	23 00	24 00
Hemlock, 2x4, 6, 8, 10, 12/16'	26 00	28 00
Tamarac	24 00	26 00
Basswood, log run, dead culls out	30 00	40 00
Basswood, log run, mill culls out	26 00	28 00
Birch, log run	30 00	32 00
Soft Elm, common and better, 1, 1½, 2-in.	25 00	30 00
Ash, black, log run	32 00	40 00
1 x 10 No. 1 barn	40 00	45 00
1 x 10 No. 2 barn	38 00	40 00
1 x 8 and 9 No. 2 barn		38 00
Lath per M:		
No. 1 white pine, 1½-in. x 4-ft.	5 25	5 50
No. 2 white pine		5 00
Mill run white pine		5 25
Spruce, mill run 1½-in.		4 50
Red pine, mill run		4 75
Hemlock, mill run		4 00
32-in. lath	2 00	2 25
White Cedar Shingles:		
xxxx, 18-in.		5 00
Clear butt, 18-in.		4 00
18-in. xx		2 75
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

White Pine

	cts.	
First class Ottawa waney, 18-in. average, according to lineal.	75	80

Oak

According to average and quality	65	75

Elm

According to average and quality, 40 to 45 feet	80	85
According to average and quality, 30 to 35 feet	55	65

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Birch Planks

1 to 4 in.	20 00	25 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$74 00
1 in., 8 in. and up wide	88 00
1¼ and 1½ in. and up wide	86 00
2 in. and up wide	88 00

Cuts and Better

4/4 x 8 and up No. 1 and better	58 00
6/4 x 8 and up No. 1 and better	72 00
8/4 x 8 and up No. 1 and better	74 00
6/4 x 6 and up No. 2 and better	61 00
8/4 x 6 and up No. 2 and better	63 00
6/4 x 6 and up No. 3 and better	55 00
8/4 x 6 and up No. 3 and better	59 00

No. 1 Cuts

1 in., 8 in. and up wide	50 00
1¼ in., 8 in. and up wide	60 00
1½ in., 8 in. and up wide	61 00
2 in., 8 in. and up wide	65 00
2½ and 3, 8 in. and up wide	84 00
4 in., 8 in. and up wide	90 00

No. 2 Cuts

1 in., 6 in. and up wide	38 00
1¼ in., 6 in. and up wide	51 00
1½ in., 6 in. and up wide	52 00
2 in., 6 in. and up wide	55 00
2½, 3 and 4 in., 6-in. and up wide	70 00

No. 3 Cuts

1 in., 6-in. and up wide		33 00
1¼ and 1½ in., 6-in. and up wide		38 00
2 in., 6-in. and up wide		39 00
2½, 3 and 4-in., 6-in. and up wide	45 00	48 00

Common and Dressing Mill Run

1 in. x 4-in.	36 00
1-in. x 5-in.	37 00
1 in. x 6-in.	39 00
1 in. x 8-in.	40 00
1 in. x 10 in.	41 00
1 in. x 12 in.	47 00
1-in. x 13-in. and up	47 00
1¼, 1½ and 2 in.	47 00

No. 1 Barn

1 inch	40 00	52 00
1¼, 1½ and 2-in.	50 00	54 00
2½ and 3 in.		60 00
4 inch		62 00

No. 2 Barn

1 inch	40 00	45 00
1¼, 1½ and 2-in.	43 00	48 00
2½ and 3-in.		50 00

No. 3 Barn

1 inch	36 00	42 00
No. 1, 1, 1¼, 1½, 2-in.		43 00

Box

No. 1, 1, 1¼, 1½, 2-in.	32 00	35 00
No. 2, 1¼, 1½, 2-in.		29 00

Mill Culls

Mill run culls, 1-in.		29 00
1, 1¼, 1½ and 2-in.		30 00
No. 2	27 00	29 00

Lath

No. 1, 32-in. pine	2 15
No. 2, 48-in. pine	5 25
No. 1, 48-in. pine	5 75
No. 3, 48-in. pine	4 75
Hemlock Lath, 48-in.	4 75

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac.

Dimension. S. 1 S. and 1 E.

	6 ft.	8 ft.	10 ft.	14 & 16 ft.
2 x 4, 6, 8	16 00	19 00	22 50	23 50
2 x 10	20 00	20 50	23 50	24 50
2 x 12	20 00	21 00	25 50	25 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH.

Mountain Stock.

Dimension.

2 x 4, 8, 12, 14, 16	23 50
2 x 4, 10, 18, 20	25 50
2 x 6, 8 to 16	23 50
2 x 8, 8 to 16	23 50
2 x 4-6 and 8 in.; 24, 26, 28, 30, 32 ft.	31 50
2 x 10 and 2 x 12; 8-16 ft.	28 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	30 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	32 50

No. 1 Common Boards.

4 inch	23 00
6 inch	25 50
8, 10, 12 inch	27 50
Mixed widths	26 50

Flooring.

4 or 6 inch No. 1	37 00
4 or 6 inch No. 2	32 00
4 or 6 inch No. 3	26 00

Shiplap—Finished.

6 inch	24 00
8, 10 and 12 inch	25 00

Siding.

6 inch No. 1	37 00
6 inch No. 2	35 00
6 inch No. 3	27 00

Lath.

No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed)	4 50

PINE—ROUGH TIMBER.

3 x 6 in.; 8 to 16 ft.	29 10
3 x 8 in.; 8 to 16 ft.	26 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	29 00
4 x 10 to 10 x 10, 8 x 8, 6x 12 in. up to 32 ft.	31 00

BRITISH COLUMBIA COAST FIR.

Dimension S1S and E.

2 x 4 in.; 6 and 8 ft.	22 50
2 x 4 in.; 12 and 14 ft.	23 50
2 x 4 in.; 10 and 16 ft.	24 50
2 x 4 in.; 18 and 24 ft.	25 50
2 x 4 in.; 22 and 24 ft.	26 50
2 x 4 in.; 26 to 32 ft.	28 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	25 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	27 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	28 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	30 00
2 x 14 in.; 10 to 16 ft.	30 00
2 x 14 in.; 18 and 20 ft.	32 00
2 x 14 in.; 22 and 24 ft.	33 00
2 x 14 in.; 26 to 32 ft.	35 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	26 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	27 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	28 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	29 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	31 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft.	29 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft.	30 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft.	30 50

FLOORING.

Nos. 1 and 2, 1 x 3 in., E. G.	37 00
Nos 1 and 2, 1 x 4 in., E. G.	40 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in. F. G.	30 00
Nos. 1 and 2, 1 x 6 in., F G.	35 00
No. 3, 1 x 4 in.	28 00
No. 3, 1 x 6 in.	33 00

No. 3 Edge grain $3 per M. extra.

SHIPLAP.

B. C. fir, 6 in.	23 50
B. C. fir, 8, 10, 12 in.; 8 to 16 ft.	24 50
No. 2 shiplap, 6 in.	23 50
No. 2 shiplap, 8, 10 and 12 in.	24 50

FIR, COMMON BOARDS, S1S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	22 00
Common boards, 8 to 12 in.	23 00
No. 2 mixed widths	18 00
No. 2 boards, 8 to 12 in.	19 00

SHINGLES.

XXX B. C. cedar	3 05

LATH.

Fir lath, ¼ x 1½ in. x 4 ft., bundled in 50's	4 50
Cedar lath, ¼ x 1½ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers, 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	80 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00
No. 1 Moulding 8/4	62 00

(Continued on page 58)

TIME

You can't see it or feel it but you can buy it and lose money on it if you don't measure it with an

International Time Recorder

The most important factor in present day business — TIME — comes in for least accounting.

You pay a man so much a day, or so much an hour, or so much for a job. Can you accurately tell how much time he gives you for your money?

International Time Recorders will do this for you with cold blooded, machine like accuracy, and will leave no loop hole for argument or dispute.

There is an International for every labor problem, and for every class of work. They are installed and relied on by the largest concerns in the world, as well as "one man" plants.

They do not actually "cost" you a cent. In a short time the initial expenditure will be returned to you in time saved, in accurate records and more satisfied employees.

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Frank E. MUTTON, General Manager
270 Dundas St. West
TORONTO
Toronto Phone—Col. 622.

MONTREAL
W. A. Wood, Jr., Sales Agent
Cartier Bldg., Cor McGill and Notre Dame Sts.
Phone—Main 7025

VANCOUVER—R. Donohoe, 624 Birks Bldg.

CURRENT LUMBER PRICES — Continued

No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda.

	1s & 2s	No. 1 Com.	No. 2 Com.
MAPLE			
4/4	43 - 45	25 - 27	15 - 17
5/4 to 8/4	55 - 57	33 - 35	17 - 21
10/4 to 16/4	65 - 67	45 - 47	25 - 27
RED BIRCH			
4/4	58 - 60	38 - 40	22 - 24
5/4 to 8/4	60 - 62	40 - 42	24 - 26
SAP BIRCH			
4/4	48 - 50	32 - 34	20 - 22
5/4 and up	50 - 52	34 - 36	22 - 24
SOFT ELM			
4/4	40 - 42	28 - 30	20 - 22
5, 6 & 8/4	42 - 44	30 - 32	20 - 22
BASSWOOD			
4/4	44 - 46	34 - 36	22 - 24
Thicker	42 - 44	32 - 34	22 - 24
PLAIN OAK			
4/4	52 - 54	33 - 35	19 - 21
5/4 to 8/4	51 - 53	29 - 31	17 - 19
ASH, WHITE AND BROWN			
4/4	51 - 54	29 - 31	19 - 21
5/4 to 8/4	61 - 64	34 - 36	20 - 22
10/4 and up	74 - 87	46 - 48	22 - 24

BOSTON, MASS.

White pine uppers, 1 to 2 in.		119 00
Selects, 1 to 2 in.	106 00	109 00
Fine common, 1 in.		78 00
Fine common, 1¼ to 2 in.	85 00	87 00
No. 1 Cuts, 1 in.		60 00
No. 1 Cuts, 1¼ to 2 in.	70 00	75 00
No. 2 Cuts, 1 in.		49 00
No. 2 Cuts, 1¼ to 2 in.	60 00	66 00
Barn Boards, No. 1, 1 x 12		65 00
No. 1, 1 x 10		55 00
No. 1, 1 x 8		52 00
No. 2, 1 x 12		57 00
No. 2, 1 x 10		52 00
No. 2, 1 x 8		49 00
No. 3, 1 x 12		49 00
No. 3, 1 x 10		48 00
No. 3, 1 x 8		46 00
Canadian spruce boards		36 00
Spruce, 12 in. dimension		46 00
Spruce, 10 in. dimension		44 00
Spruce, 9 in. dimension		43 00
Spruce, 8 in. under dimen.		40 00
10 and 12 in. random lengths, 8 ft. and up	42 00	43 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7,		31 00
3 x 4 and 4 x 4 in.		32 00
2 x 8 in.		37 00
All other random lengths, 7-in. and under, 8 ft. and up	31 00	32 00
5-inch and up merchantable boards, 8 ft. and up, p 1s		35 00
1 x 2		30 00
1 x 3		29 00
1⅝-in. spruce lath		4 90
1½-in. spruce lath		4 35

New Brunswick Cedar Shingles

Extras		4 50
Clears		4 15
Second Clears	3 25	3 50
Clear whites		2 50
Extra 1s (Clear whites in)	1 75	2 25
Extra 1s (Clear whites out)	1 65	1 90
Red Cedar Extras, 16-in. 5 butts to 2 in.		5 00
Red Cedar Eurekas, 18-inch 5 butts to 2 in.		5 40
Red Cedar Perfections, 5 butts to 2¼		6 00
Washington 16-in. 5 butts to 2-in. extra red cedar.		5 00

Blanchard Lumber Co.

H. W. BLANCHARD, Treas.

WHOLESALE LUMBER

Eastern Spruce
Hemlock
Pine
Shingles and Lath

Shipment by car, canal boat or cargo.

Owing to constantly increasing sales we are anxious to establish new connections with Eastern Spruce mills, for shipment by car to Boston and New York markets, or by canal boat from Quebec to New York.

We also desire more connections with manufacturers of British Columbia red cedar shingles and cedar siding.

We will buy outright or sell on a 5 per cent. commission.

Douglas Fir
Red Cedar Shingles
Hard Pine
Maple Floors

We manufacture Spruce at our own Mills at Portage, Maine, U. S. A., and therefore we know what big prices mean to the manufacturer

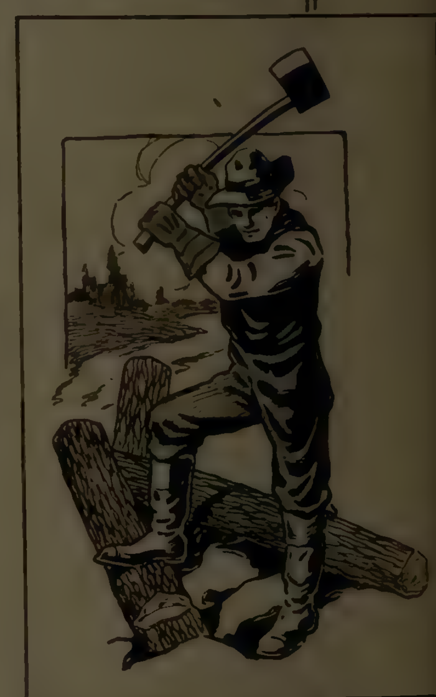
11 Broadway, NEW YORK, N.Y., U. S. A.
126 State Street, BOSTON, MASS.
Western Office: Lumberman's Bank Bldg., Portland, Ore.

Drafted for Service in the Lumber Camps

"ASBESTOL" Gloves and Mittens will serve the boys in the lumber camps as they serve their country.

Faithful in service and ready to meet any task to which a good work glove or mitten can be put.

"ASBESTOL" Gloves and Mittens are soft and pliable. Well made from the finest leather and can be depended upon for service in the coldest winter days.



ASBESTOL REG. IN U.S. PAT. OFF.
EISENDRATH'S CELEBRATED HORSE HIDE

Gloves & Mittens have no equal. There is nothing "just as good"

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PRATT & WHITNEY CO.

OF CANADA, LIMITED

SMALL TOOLS

Taps — Dies — Reamers — Cutters — Drills

MADE IN CANADA

As good as money can buy—Guaranteed absolutely!

Head Office and Works, DUNDAS, ONT.

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Railway and Track Supplies

For Lumber and Contractors' requirements

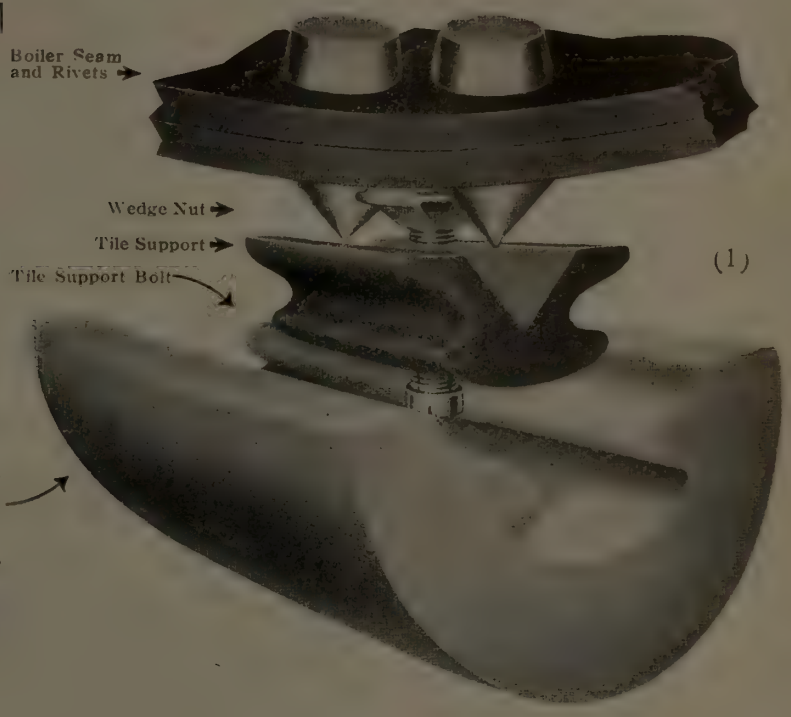
Rails, Locomotives, Accessories, Cars, Lion Brand Babbitt Metal

Correspondence solicited

Sessenwein Bros., Montreal

THE NATIONAL BOILER GIRTH SEAM PROTECTOR

An Absolute Prevention Against Mud Cracks, Fire Cracks and Leaks on All Boilers



(1)

This Protector has proven its merits under the most severe tests and is guaranteed for two years.

The National Girth Seam Protector will prevent fire cracks at the seams and between rivets, and thereby eliminate costly repairs and loss of time through leaks.

If you are now using H. T. Boilers you are aware that the seam is a great deal of trouble, owing to crystallization and fire cracks. The lapping of the plates makes the distance from the inside of the boiler too great for the water to keep the outer lap sufficiently cool; therefore the constant opening and shutting of the fire doors allows the cold air to rush in the fire box, causing variation of temperature which results in violent expansion and contraction of the outer laps. The Protector prevents this.

If you have fire cracks or leaks caulk them up, put on a Protector and the seam will remain absolutely dry thereafter.

Hundreds Have Been Installed on Stationary Locomotive and Marine Boilers

The National Girth Seam Protector is endorsed by Engineers, Boiler Inspectors and Insurance Companies.

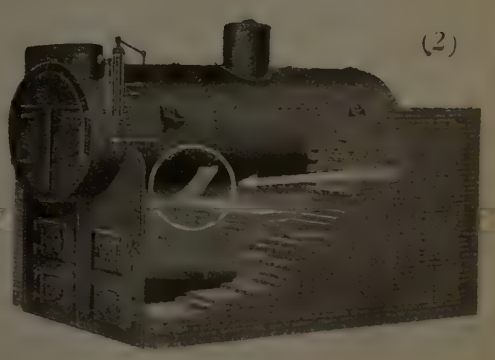
A few large users of the National Protector in the U.S.A. and Canada:

United States Government.
Carnegie Steel Works (Homestead) Pittsburgh.
Standard Oil Company.
Imperial Drop Forge Co., Indianapolis, Ind.
United Paper Board Co., Evansville, Ill.
Borden Milk Co., New York.
Dominion Copper Products Co., Montreal.
Howards Smith Paper Mills, Beauharnois.
And hundreds of others.

All new boilers should be protected; prevent your boiler from becoming fire cracked by putting on a National Boiler Protector.

The illustration above (1) shows one complete section of this National Protector. Five such sections make the National Boiler Girth Seam Protector shown in place at the arrow tip in the lower illustration (2).

So simply constructed is this National Protector that any fireman can attach it in 30 minutes.



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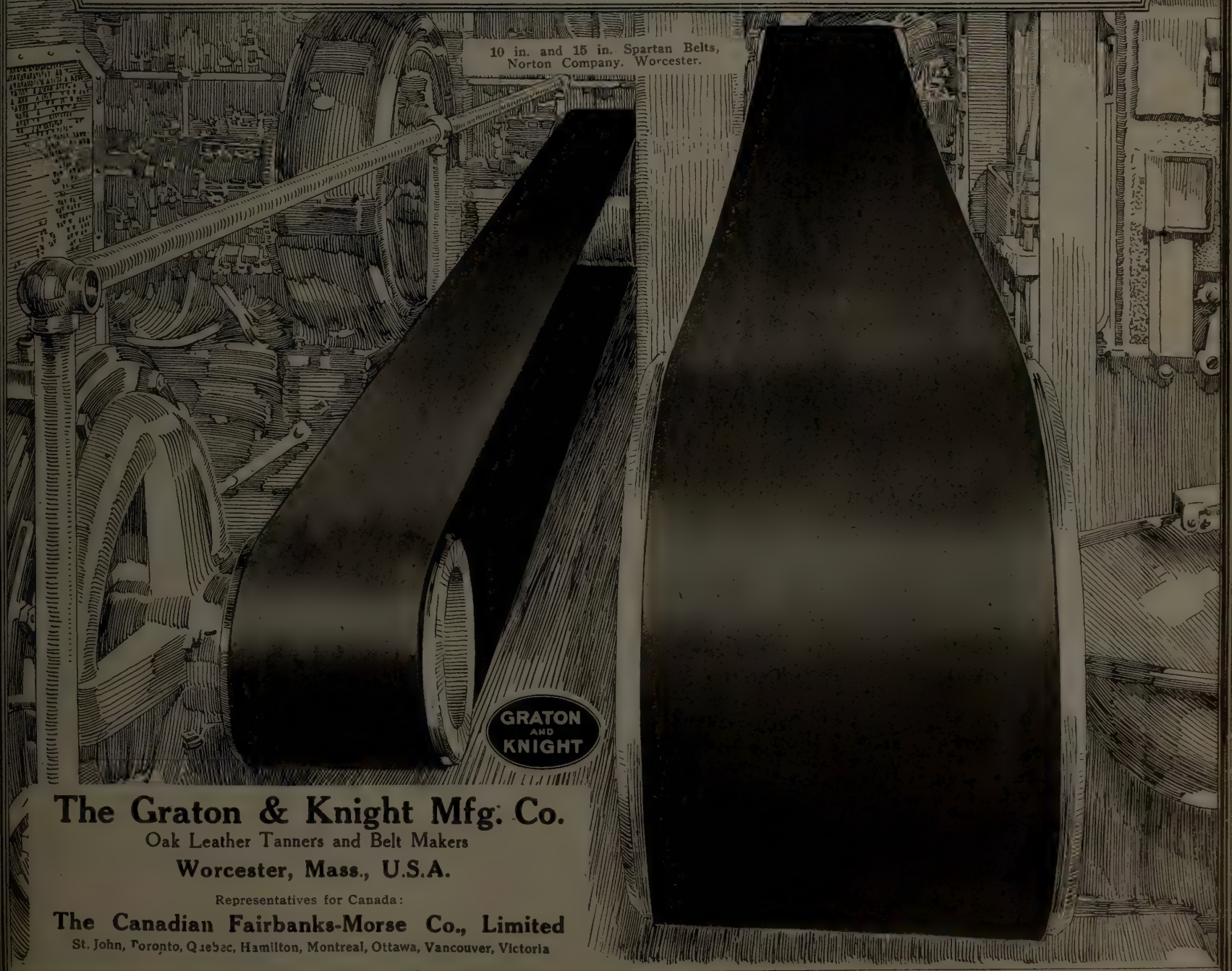

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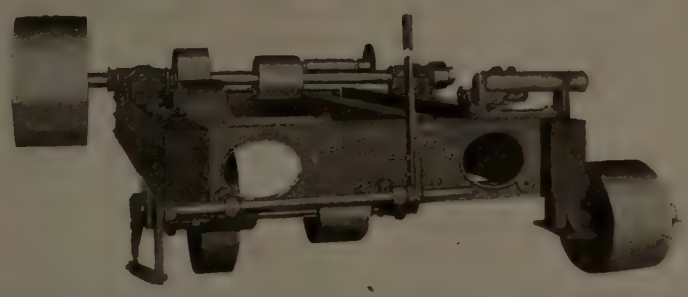

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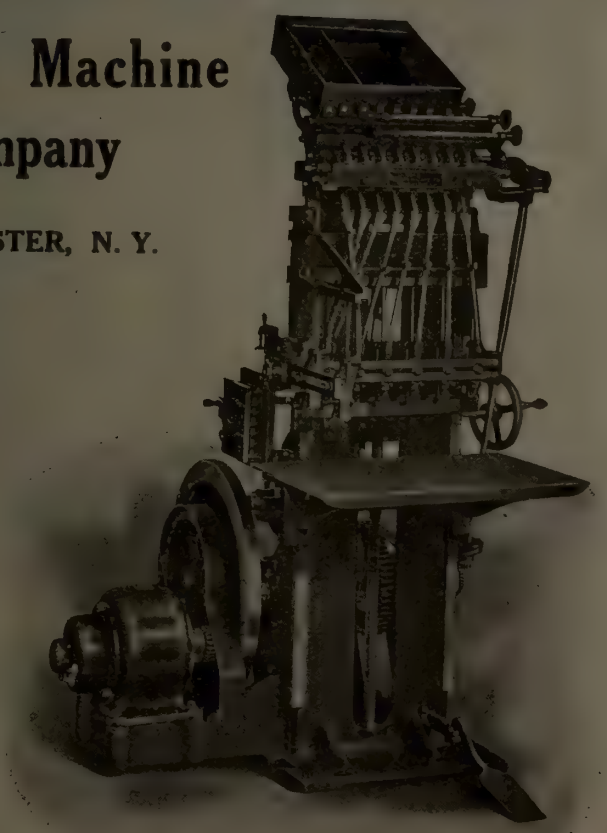

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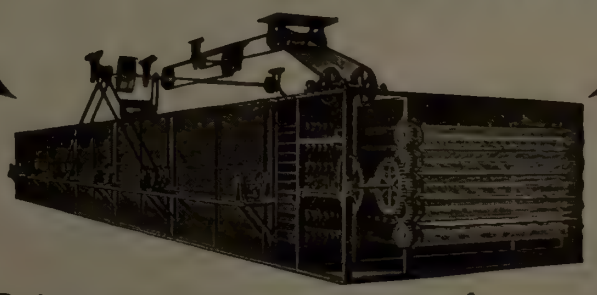

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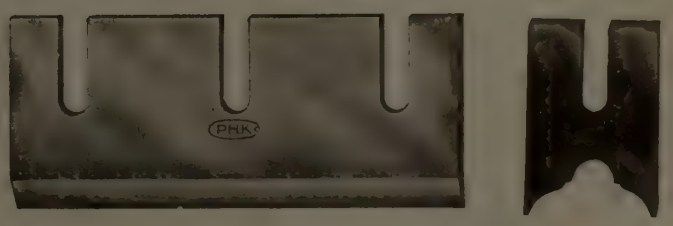

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To get the full steam value out of the fuel you burn install Waterous Return Tubular Boilers. It will pay you for these reasons:—

They are economical of fuel. They carry plenty of steam in reserve for use in emergencies. They can be used with hard and dirty water. They are easily cleaned and readily taken care of.

Furthermore, We design and supply the fittings for various styles of boiler settings that are suited to best handle the fuels used in the sawmill, giving great efficiency and perfect combustion.

We build and carry in stock Return Tubular Boilers up to 72" x 18 ft. If we cannot supply you at once from our yards we can turn out your order in reasonable time. Ask us for prices on the next boiler you buy.

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United Grain Growers Ltd., Hutton, B.C.
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worth of mixed metal sold annually.

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. Price **30c per lb.**, Fort William and East; West of Fort William **35c per lb.**, delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

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Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

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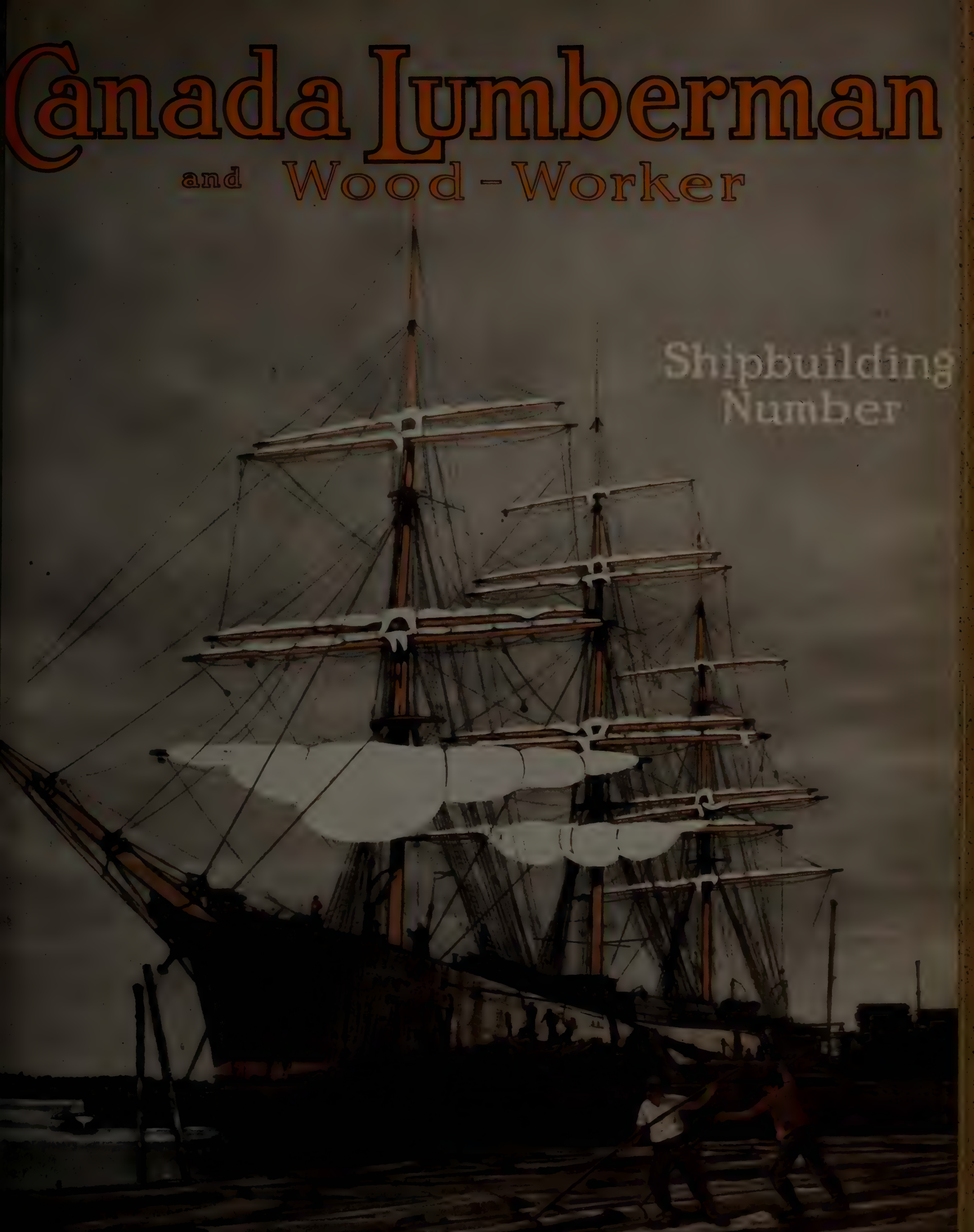

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Merchantable

2 x 4 x 10/16	-	33,368'	2 x 6 x 10/16	-	5,459'
2 x 5	-	22,704'	2 x 7 x 10/16	-	77,272'

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Merchantable

1 x 3 x 10/16	-	128,360'	2 x 4 x 8/16	-	218,053'
1 x 4 "	-	286,212'	2 x 5 "	-	134,920'
1 x 5 "	-	80,514'	2 x 6 "	-	61,630'
1 x 6 "	-	30,004'	2 x 7 "	-	39,586'
1 x 7 and up	-	19,760'	2 x 8 "	-	16,360'
1 x 3 and up x 6 10		33,613'	2 x 9 and up	-	9,000'

Mill Culls

1 x 3 and up x 6/16 - 47,200' 2 x 4 and up x 6/16 - 62,500' 3 x 6 and up x 6/16 - 118,819'

Merchantable Spruce Lath 1½ x 4'—1,500,000 pieces

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All sizes up to 94 ft.

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13 Cars No. 1 (Cull)
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SPRUCE AND WHITEWOOD LATH
Planing Mill in connection with Saw Mill
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Full supply of Seasoned Lumber always on hand.

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Special Prices

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We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, McConkey, Mills, Allen, Secord, Falconbridge and Street.

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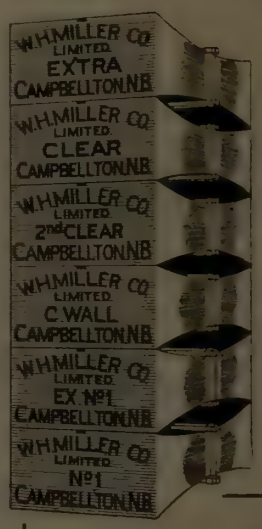

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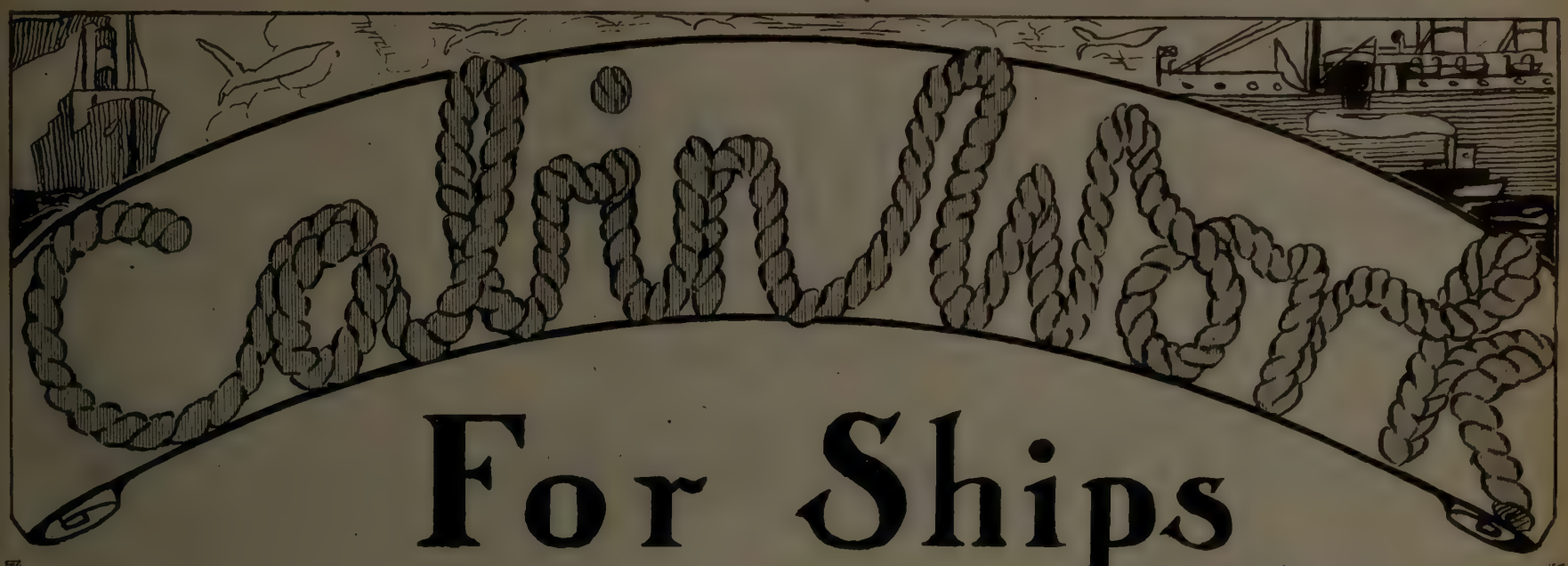

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Oak Mouldings, Doors, Sashes and Blinds, Cedar Poles and Ties,
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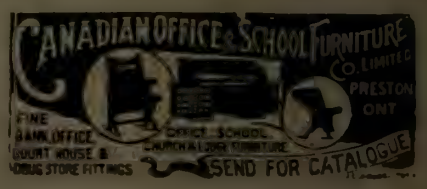

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40 M 5/4 x 5 Merch.
40 M 5/4 x 6 Merch.
20 M 5/4 x 7 Merch.
8 M 5/4 x 8 Merch.
100 M 2 in. Scant x 5 Merch.
100 M 2 in. Scant x 7 Merch.
150 M 2 in. Scant x 8 Merch.
100 M 2 in. Scant x 9 Merch.
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20 M 5/8 x 4 and up Cull.
50 M 1 x 4 and up Cull.
10 M 5/4 x 4 and up Cull.
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The above is choice, well sawn stock, largely 12 and 13'. Can be shipped promptly.

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Gentlemen,

Kindly discontinue our little sale ad., one car lumber.

We got fifteen enquiries for the one car.

Yours truly,

C. B. JANES & CO., LTD.

(signed) C. B. Janes

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We Manufacture and Deal in

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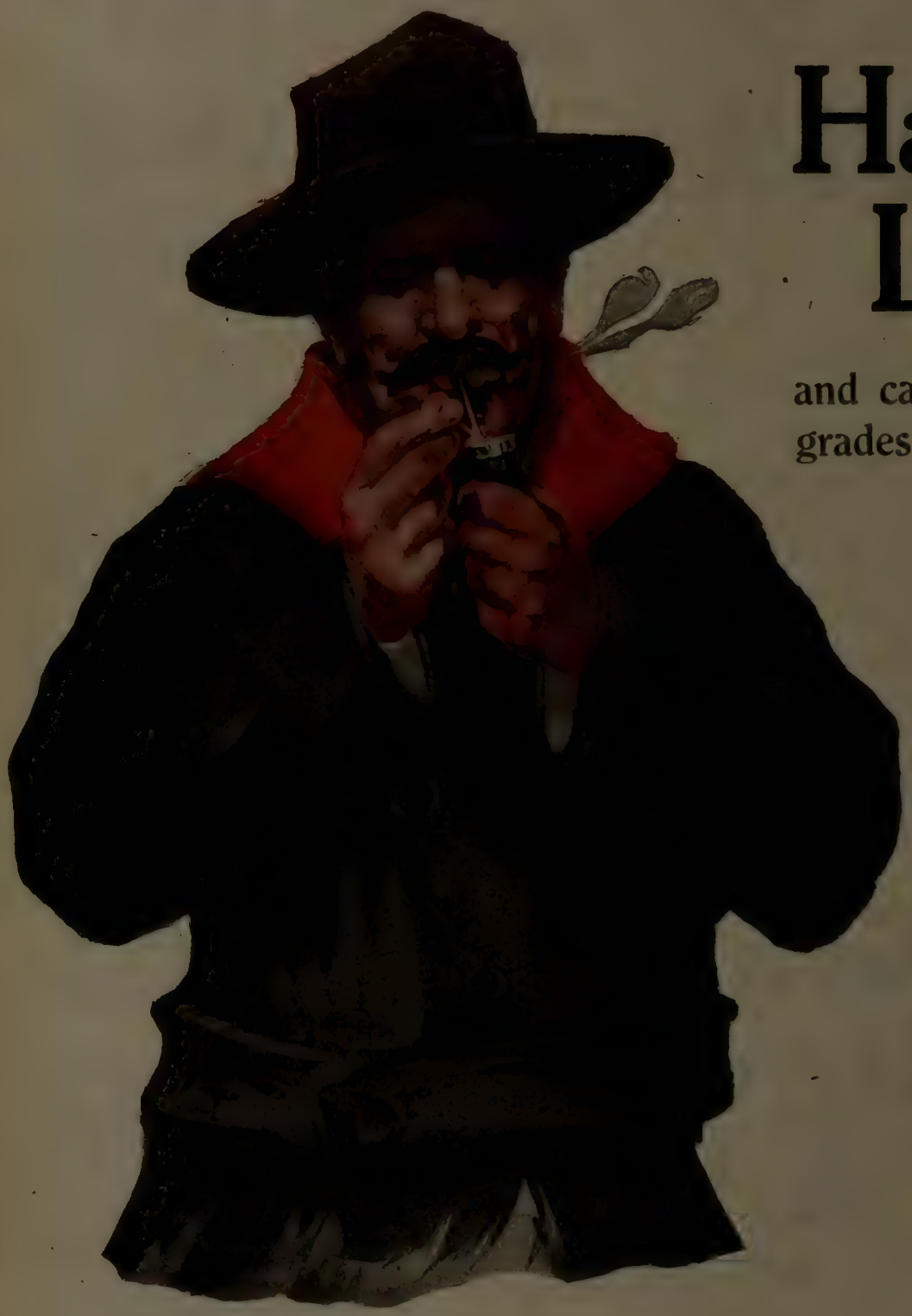

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Price 50 cents

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The Heavier it is the Better we like it

We Dress from 1 to 4 Sides up to 16-in. x 20-in., 60-ft.

Our grade is positively right, and prices will please

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Mills at Craigs on the B.C.E.R.
Shipments by C. P. R., C. N. R., G. N. R., and N. P. R.

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MANUFACTURERS OF

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Cedar Bevel Siding, Finish, V-Joint and Mouldings

Straight or mixed cars with XXX and XXXXX Shingles. Stocks carried at Lindsay, Ont., for quick shipment.

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Stearns Quality

Michigan Forest Products
Hardwood, Hemlock, White Pine

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40 Million Feet Dry Stock
in pile containing a complete
assortment for rush shipment.

Grades— GUARANTEED —Quality

Hardwood Specialists

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Hemlock Dry Stock is our main product and we have the best facilities on the Georgian Bay for handling this lumber.

Stock matched or sized, if required.
Phone, write or wire.

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Yards at—Nashville, Tenn. Basic, Va. *Mills at*—Sumter, S.C. Winchester, Idaho

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Prompt shipment of Fir timbers in all sizes and up to 80 feet in length

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Manufacturers of

LUMBER, LATH AND SHINGLES

RIGHT GRADES—PROMPT SHIPMENTS

Dressing in transit. Send us your inquiries.

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1 car 8/4" Hard Maple, Log Run, Culls Out.
5 " 5/8" Spruce, Mill Culls
5 " 5/8" Spruce, No. 1.
4 " 4/4 Quebec Brown Ash, Log Run, Culls Out.
4 " 4 in., 5 in., 6 in., 7 in. Spruce Box Stock, already milled. Suitable for Bethlehem Box.
1 " 6/4" Arkansas Soft Elm, No. 1 C. & M.
Seventy per cent. 12 and 16 feet.

I want to buy 4/4, 5/4 winter sawn Basswood

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If you're wanting something in lumber—just a little better than the ordinary—it will repay you to let us send you quotations and samples.

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High Grade
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Spruce, Hemlock, White Pine, Hardwood, Lath
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Panoramic View of the Plant of

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Ship Planting for delivery during August and September, 1918.
3 x 5 - 6 - 7 inches x 20 to 30 feet in W. and R. Pine.

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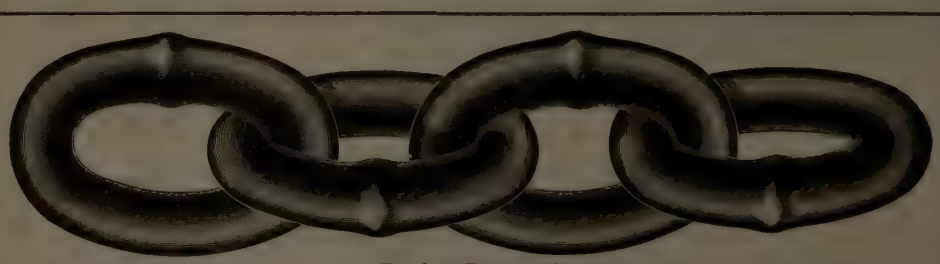

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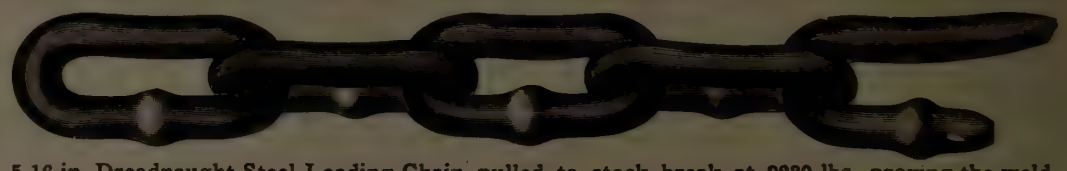
McKinnon Electric Weld Chains are sold to you under an absolute guarantee of weld perfection. We will replace any chain free of charge if it breaks at the weld.

Chains replaced if break occurs at the weld



5-16 in. Dreadnaught Steel Loading Chain, pulled to stock break at 9230 lbs., proving the weld the strongest part of the link. Tested at Syracuse University, September 27, 1912.

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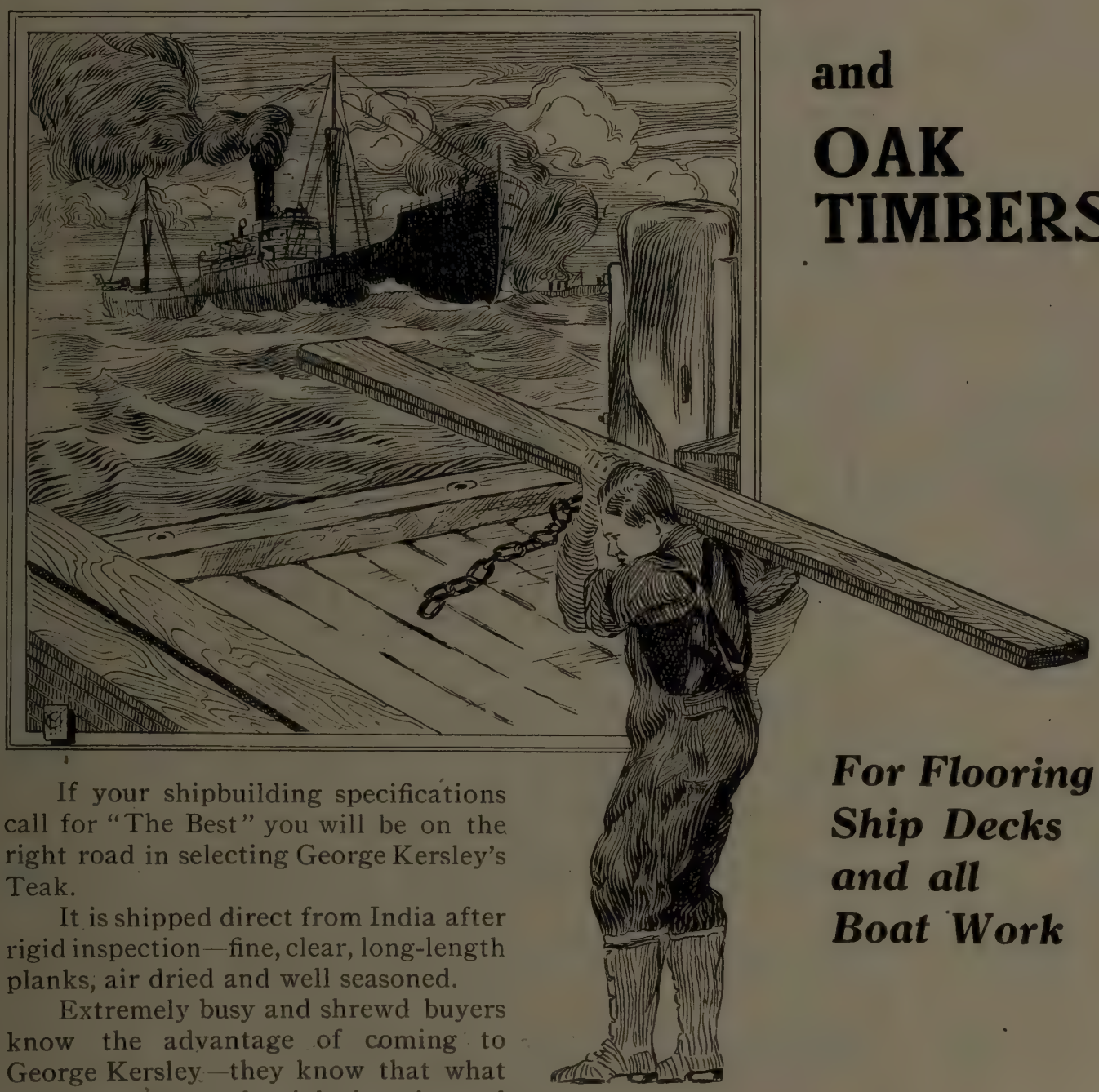

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Extremely busy and shrewd buyers know the advantage of coming to George Kersley—they know that what he passes on must be right in price and quality—they know that the ultimate result will be economy in time and money.

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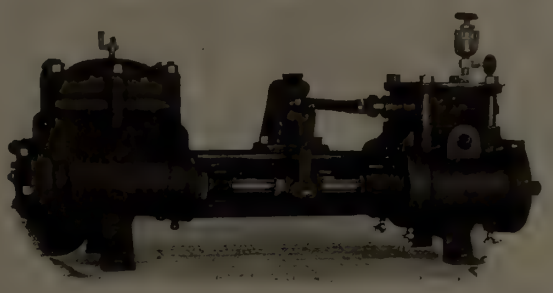

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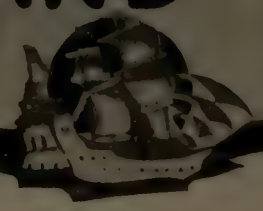

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Nowhere is the importance of perfect saws more imperative than in building a good ship and keeping her safe and seaworthy. That is why shipbuilders and ships' carpenters use Disston saws and tools.

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The shipping of the world salutes the superiority of Disston standards—from the leisurely gondolas of Venice to the swift greyhounds of Ocean lanes.

Disston makes every type of saw used in shipbuilding. Metal saws that nip into the harsh texture of steel cables and heaviest castings with rigid ease. Powerful cross-cut saws that fell and buck the millions of feet of Southern pine, Douglas fir, oak, ash, cedar, and cypress needed for our new merchant marine. Great power-driven band and circular saws that cut it into shipyard lengths. Hand saws that are the first choice, man for man, of over 75 per cent. of the woodworkers of the world.

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Dependable Accurate Saw Mill Machinery

Used In Scores Of Mills All Over Canada

LEADERSHIP, after all, ascends to the fittest. Economy, service and value are the qualities which count.

The "Hamilton" imprint has been known for years as a sufficient testimonial for these merits.

"Hamilton" Garland Gang Edgers are especially recognized for their worth. They are strong, accurate and easily operated, made in all widths with necessary number of saws to suit requirements.

Let us give you further information. It places you under no obligation.

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In our Stock for Immediate Shipment

Turbo-Generator Units

60-Cycle

1 1500 KW. General Electric-Curtis vertical, 2 or 3 ph., 1150 volts, form T, 8 pole, 900 R.P.M.
1 1250 Kva. Westinghouse-Parsons horizontal, 3 phase, 2200 volts, 2 pole, 3600 R.P.M., with LeBlanc jet type condenser.
2 1000 KW. General Electric-Curtis vertical, 3 phase, 2300 volts, 1200 R.P.M., with condensers.
1 1000 KW. Allis-Chalmers horizontal, 2 or 3 phase, 2300 volts, 1800 R.P.M., with condenser.
1 750 KW. General Electric-Curtis vertical, form P., 3 phase, 4 pole, 4600 or 2300 volts, 1800 R.P.M.
1 750 KW. General Electric-Curtis horizontal, type ATB, 3 phase, 2300 volts, condensing, with 9½ KW. turbo-generator exciter set.
2 500 KW. General Electric-Curtis vertical, type ATB, form T, 3 phase, 4000 or 2300 volts, 1800 R.P.M., with exciter and condensers.
2 500 Kva. General Electric-Curtis vertical, 3 phase, 2300 volts, 1800 R.P.M.
1 400 KW. Westinghouse-Parsons horizontal, 2 or 3 phase, 2200 volts, 3600 R.P.M.
1 300 KW. Westinghouse-Parsons horizontal, 3 phase, 440 volts, 3600 R.P.M., with condenser.
1 156 Kva. Westinghouse-Parsons horizontal, 3 phase, 480 volts, 3600 R.P.M., with exciter.
1 100 KW. General Electric-Curtis horizontal, 2 or 3 phase, 240 volts, 3600 R.P.M., with direct connected exciter.

Direct Connected Alternating

Current Units—60-Cycle

1 475 KW. General Electric, 2300 volts, 120 R.P.M., direct connected to 18 and 36 in. x 36 in. Lane & Bodley horizontal cross compound engine.
2 425 KW. Allis-Chalmers-Bullock, 2200 volts, rev. fld., 150 R.P.M., direct connected to 26 in. and 42 in. x 27 in. Erie Ball horizontal cross compound engines.
1 300 KW. Westinghouse, 2300 volts, 180 R.P.M., direct connected to 16 in. and 30 in. x 24 in. Penn. Iron Works horizontal 4-valve cross compound engine.
1 175 KW. Westinghouse, 220 volts, 225 R.P.M., dir. conn. to 20 in. x 18 in. Fleming-Harrisburg left hand engine.
1 125 KW. Fort Wayne, 2200 volts, 225 R.P.M., direct connected to 16 in. x 18 in. Russell horizontal engine.
1 120 KW. Allis-Chalmers-Bullock, 2400 volt, 277 R.P.M., Engine type—No engine.
1 50 Kva. Fairbanks-Morse, 2300 volts, 300 R.P.M. Engine type—No engine.
1 50 KW. Fort Wayne, 2300 volts, 300 R.P.M., dir. conn. to 11 in. x 12 in. Chuse horizontal 4-valve engine.

Reciprocating Units

Direct Current — 250-275 Volts

1 800 KW. Gen. Elec., 10 pole, 100 R.P.M., dir. conn. to 36 in. x 48 in. E. P. Allis heavy duty engine.
1 500 KW. Crocker-Wheeler, CCD, 90 R.P.M., dir. conn. to 22 in. and 38 in. x 48 in. Hamilton cross cmpd. engine.
2 500 KW. Gen. Elec., MP-H, 10 pole, 100 R.P.M., dir. conn. to 32 in. x 48 in. Greene right hand engines.
1 500 KW. Ft. Wayne, MPL-10, 90 R.P.M., dir. conn. to 22 in. and 38 in. x 48 in. Bates cross compound engine.
1 325 KW. Westinghouse, 10 pole, 100 R.P.M., dir. conn. to 16 in. and 30 in. x 42 in. Hamilton Corliss tandem compd. engine.

Reciprocating Units—Direct Current.—Continued.

1 225 KW. General Electric, 6 pole, 150 R.P.M., dir. conn. to 20 in. x 30 in. Buckeye engine.
1 200 H.P. General Electric, 8 pole, 150 R.P.M., Engine type—No engine.
1 200 KW. Crocker Wheeler, CCD, 8 pole, 175 R.P.M., dir. conn. to 14¼ in. and 25 in. x 21 in. Buckeye horizontal tandem compound engine.
2 160 KW. Gen. Elec., MP-L, 8 pole, 150 R.P.M., dir. conn. to 14 in. and 25 in. x 24 in. Buckeye tandem compd. engine
1 75 KW. Allis-Chalmers-Bullock, 6 pole, 275 R.P.M., dir. conn. to 11 in. and 18 in. x 11 in. Shepherd vertical cross compound engine.

Water Tube Boilers

1 600 H.P. Stirling, 150 lbs. pressure.
1 517 H.P. Stirling, 150 lbs. pressure.
1 443 H.P. Sterling, 200 lbs. pressure.
3 406 H.P. Heine, 200 lbs. pres. New. With Taylor stokers.
6 400 H.P. Babcock & Wilcox, 160 lbs. pressure.
1 400 H.P. Wickes vertical, 110 lbs. pressure.
6 360 H.P. Erie City, 160 lbs. pressure.
1 310 H.P. Stirling, 200 lbs. pressure.
4 293 H.P. Heine, 160 lbs. pressure.
2 240 H.P. Stirling, 140 lbs. pressure.

Hoists—Electric Driven

2 Williamson electric hoists, 2-drum, 2-speed, drums 17 in. dia. x 32 in. face, flanges 4½ in., direct connected to 75 H.P. General Electric induction motors, ITC, form M, 60 cycle.
3 Maine electric hoists, 2 drums 18 in. x 32 in., flanges 7 in., driven by 75 H.P. Gen. Elec. type M. motors, 3 phase, 60 cycle, 220 volts, 900 R.P.M.
8 Flory electric hoists, 2-drum, 2-speed, drums 16 in. x 30 in. face, 11 in. flanges, with six operating levers, dir. conn. to 75 H.P. Gen. Elec. induction motors, ITC, form M, 220 volts, 60 cycle.
7 Lidgerwood single drum electric mine hoists, drums 30 in. x 24 in. face, 4 in. flanges, 1500 lbs. rope pull at 1000 ft. per minute, geared to 52 H.P. Westinghouse motors, 220 volts direct current.
8 Lidgerwood single drum electric hoists, drums 30 in. x 24 in. face, 4 in. flanges, designed for 1500 lbs. rope pull at 1000 ft. per minute, each geared to one 52 H.P. Gen. Elec. 60 cycle motor; form M, 220 volts, 830 R.P.M.
2 Meade-Morrison 2-drum electric hoists, drums 30 in. x 24 in. face, 3 in. flanges, with 40 H.P. Westinghouse direct current motors, 500 volts, type K, 500 R.P.M.
1 Maine 2-drum electric hoist, drums 12 in. x 24 in. face, 6 in. flange, direct geared to 37 H.P. induction motor, 60 cycle, 440 volt, 1200 R.P.M.
1 Maine single drum electric hoist, 220 volts direct current, 450 R.P.M., 2000 lbs. capacity. Drums designed for 400 ft. of cable.

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1 Double drum, double cylinder reversing steam hoist, cylinders 8½ in. x 10 in. drums, 27 in. x 30 in. capacity, 3000 lbs.
1 Flory double drum, double cylinder steam hoist, cylinders 8¼ in. x 10 in., drums 27 in. x 30 in.
1 Rawson & Morrison twin drum steam hoist, cylinders 10 in. x 12 in., drums 32½ in. x 12 in., flanges 4 in.
1 Meade-Morrison double drum, double cylinder steam hoist, cylinders 10 in. x 12 in.

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Portable Electric Planing Machine

If you build Wooden Boats you need this machine for planing decks and ways.

Made in three sizes, 10-12-15-inch, and furnished complete with motor ready to operate.

Annular ball bearings to rolls.

Depth of cut is adjustable and knives lift clear of floor on return movement.

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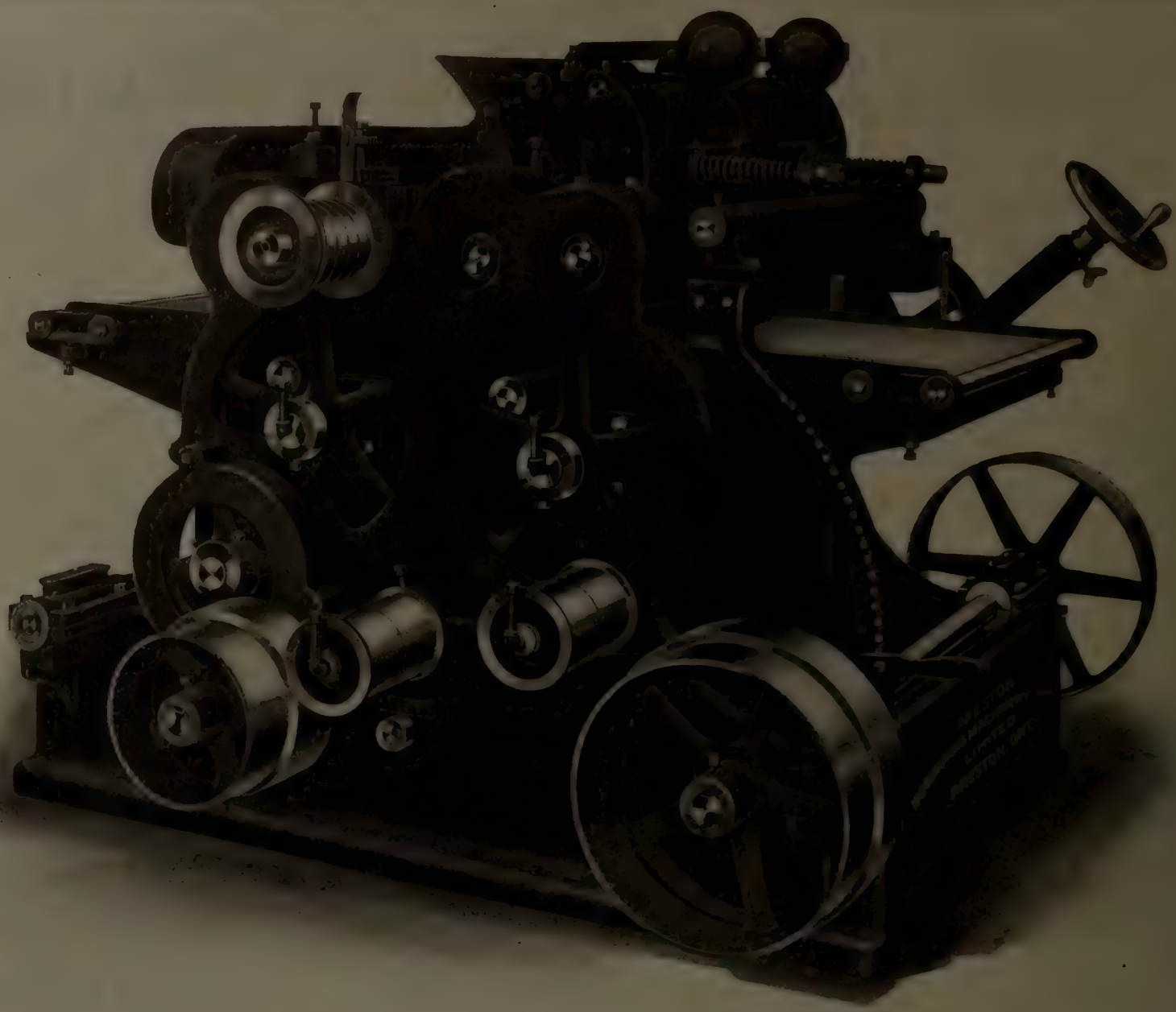

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With Divided or Straight Roll. Planes 26 ins. and 30 ins. wide,
10 ins. thick. Long Whitney Boxes. All Gears Protected.
All Feed Rolls driven by large powerful gears.
Special attention to Lubrication. Substantial floor bearing.
Durability. Convenience. Weight. Speed.

Ask us for circular of this machine. It is a strongly built heavy machine and we commend it to Shipbuilders and any Woodworkers as being ABLE TO GO THE LIMIT and produce BEST AND SMOOTHEST RESULTS.

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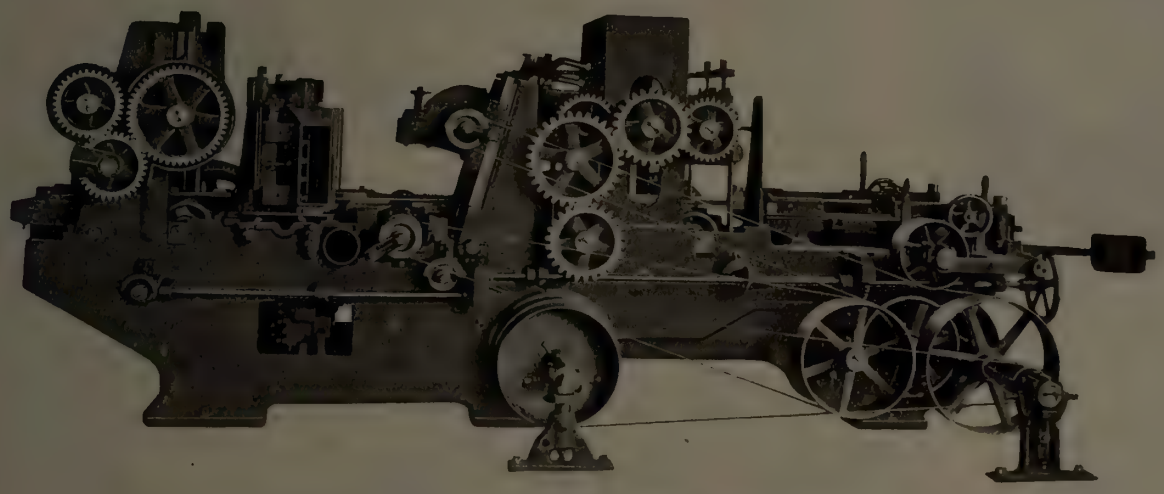

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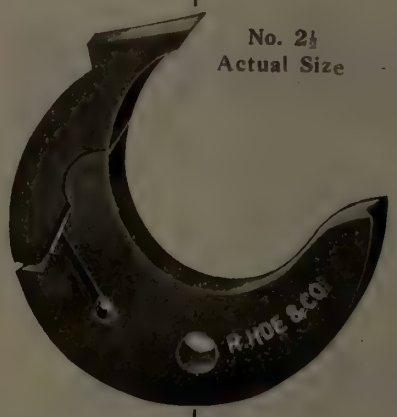

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Actual Size

No saw can equal the cutting quality of Hoe Chisel-Tooth Saws. Our No. 2½, illustrated, is especially adapted for mills cutting heavy steam feeds. This size also made in suitable gauges for Edgers, Bolters and Lath Machines. We are pioneers of the industry. Nearly 100 years of saw making.

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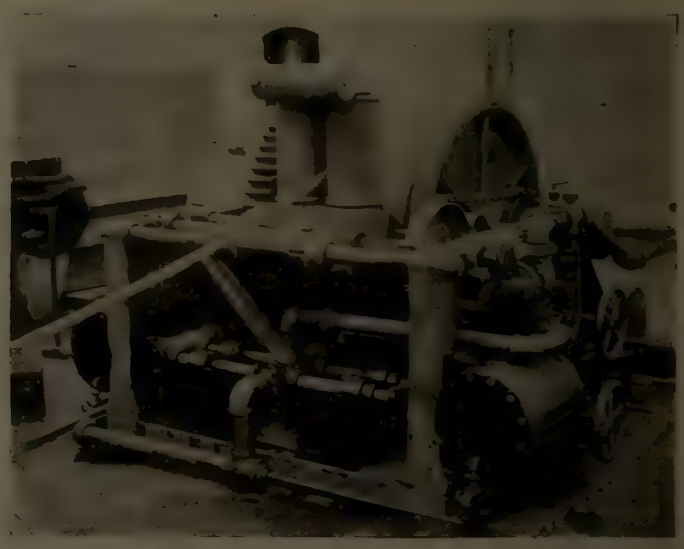
Those wishing to Increase the Earning Power of their Tug are installing the

"CORBET"

Automatic Double Cylinder Steam Towing Machine



This illustration shows our No's. 1, 3 and 4 machines, which represent our new designs, the engines of which are built on the outside of the frames, enabling the machine to be built much lower than if the engines were underneath, as in our No. 2 design. This also prevents the tug from being tipped when pulling at right angles at the tow.

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B. C. Representative—E. Read, 407 Hastings St. W., Vancouver, B. C.

Owen Sound, Ont., July 14, 1916.

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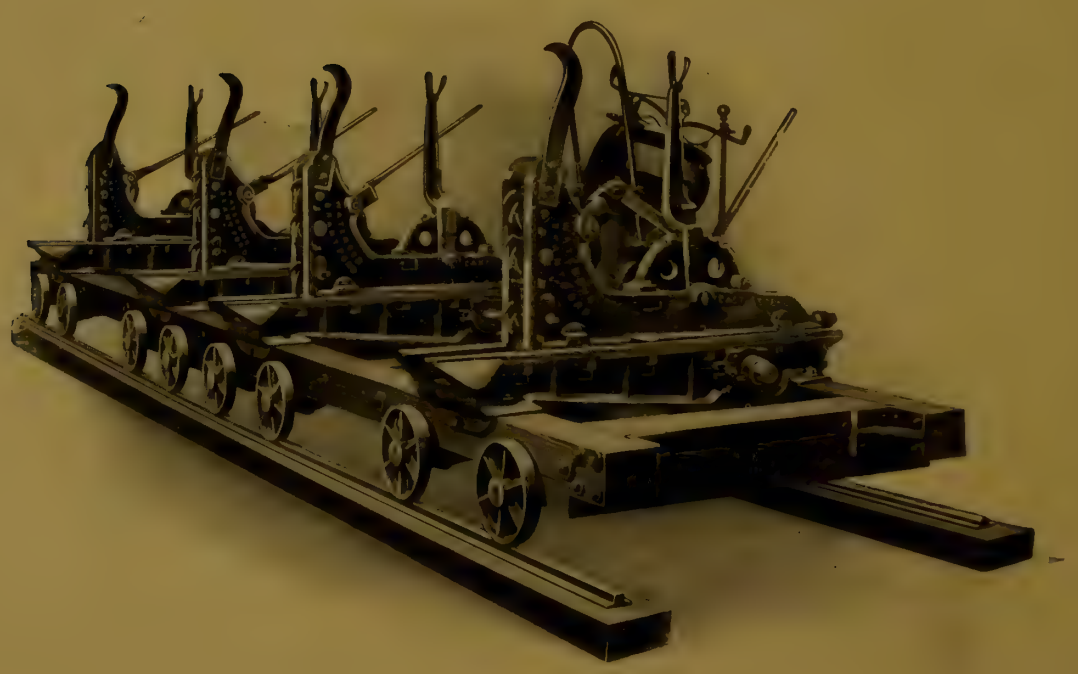

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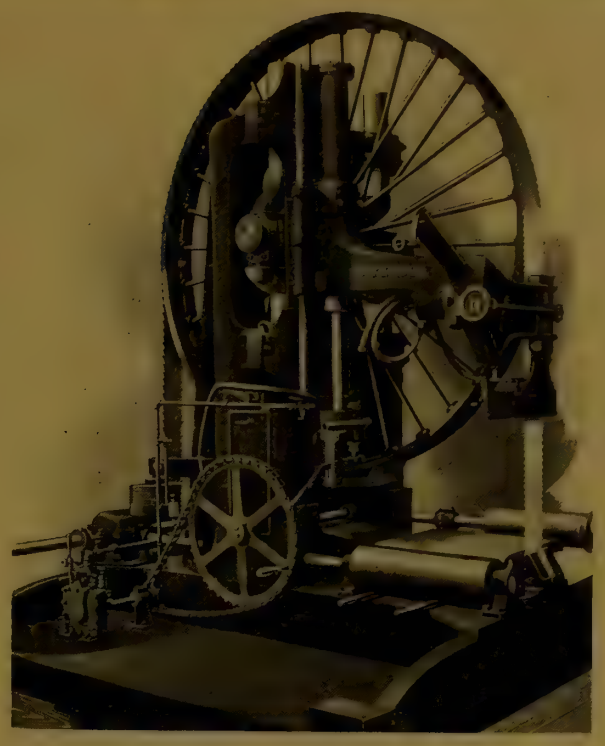

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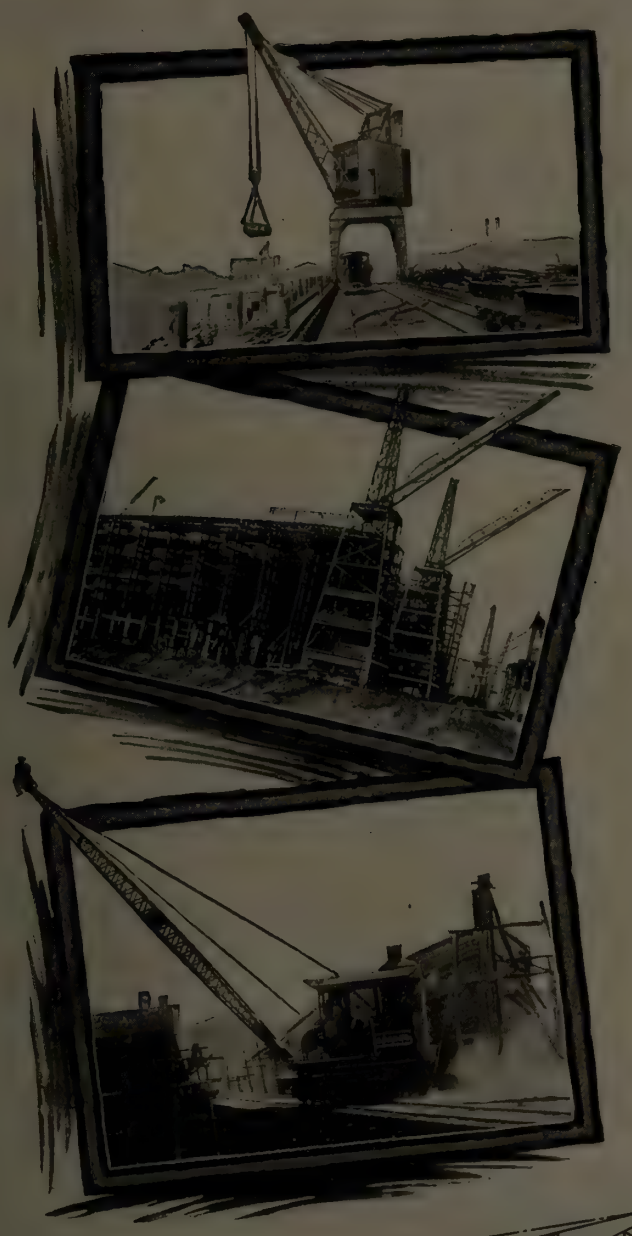

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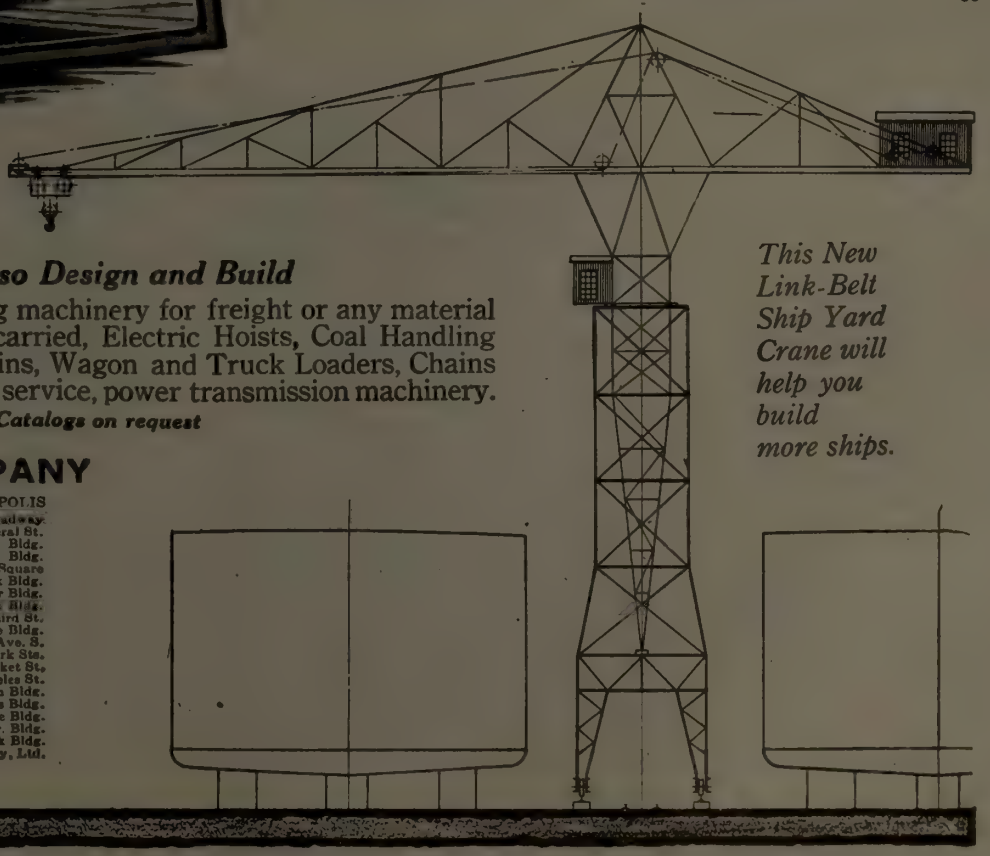

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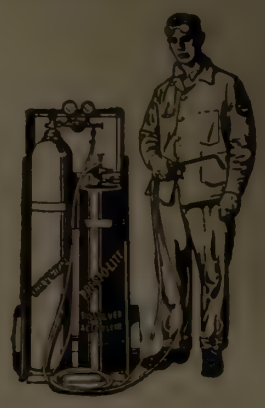

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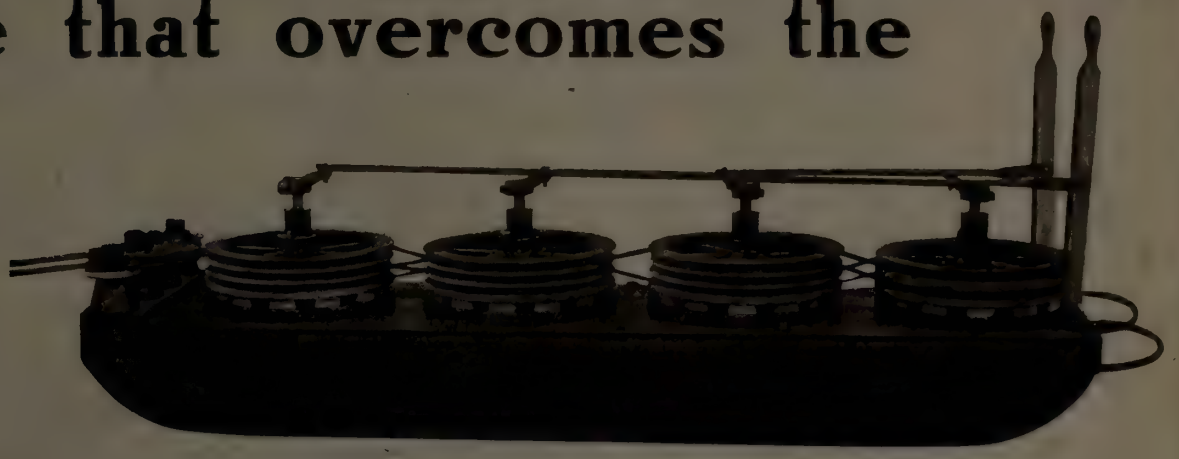

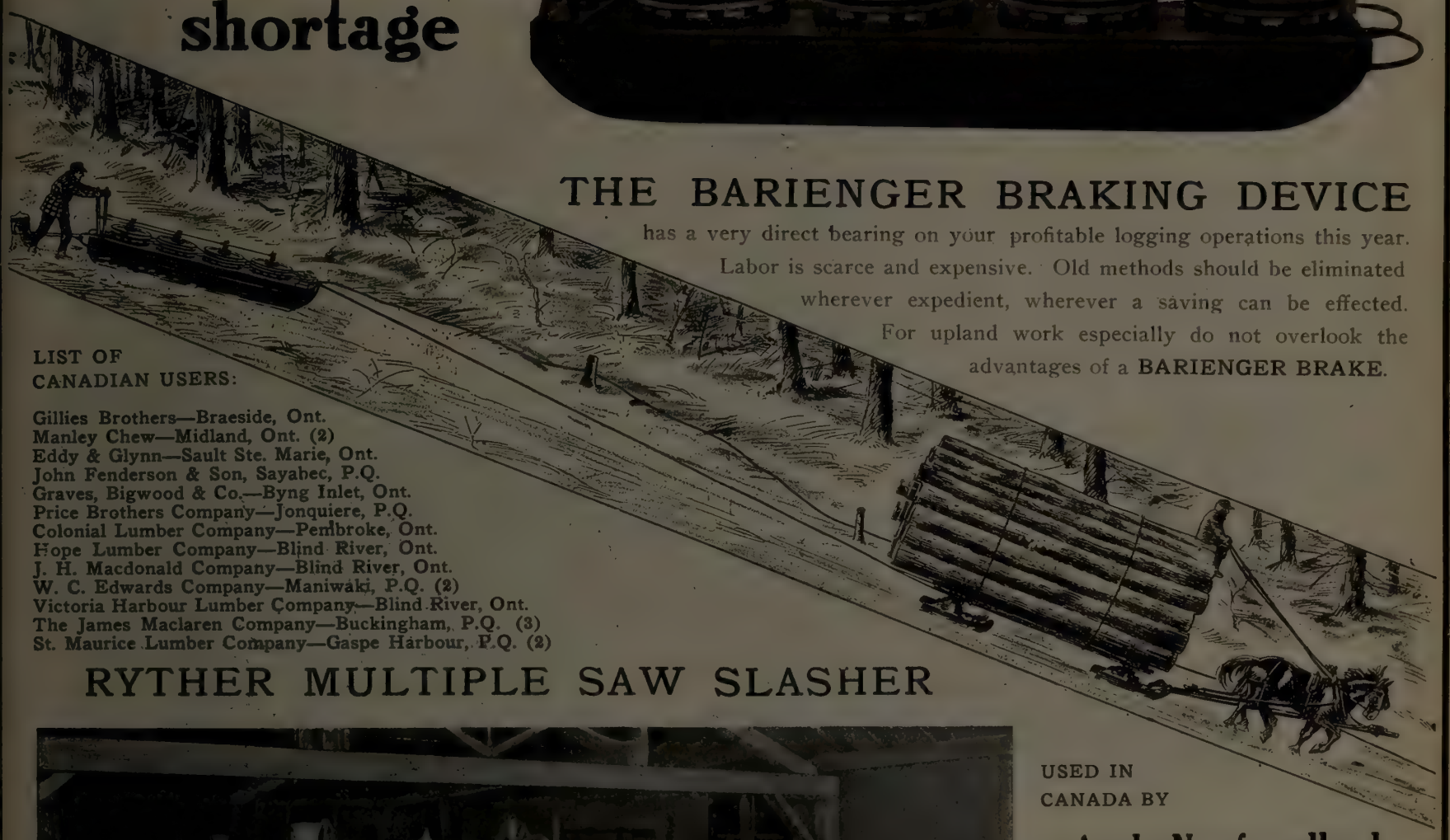

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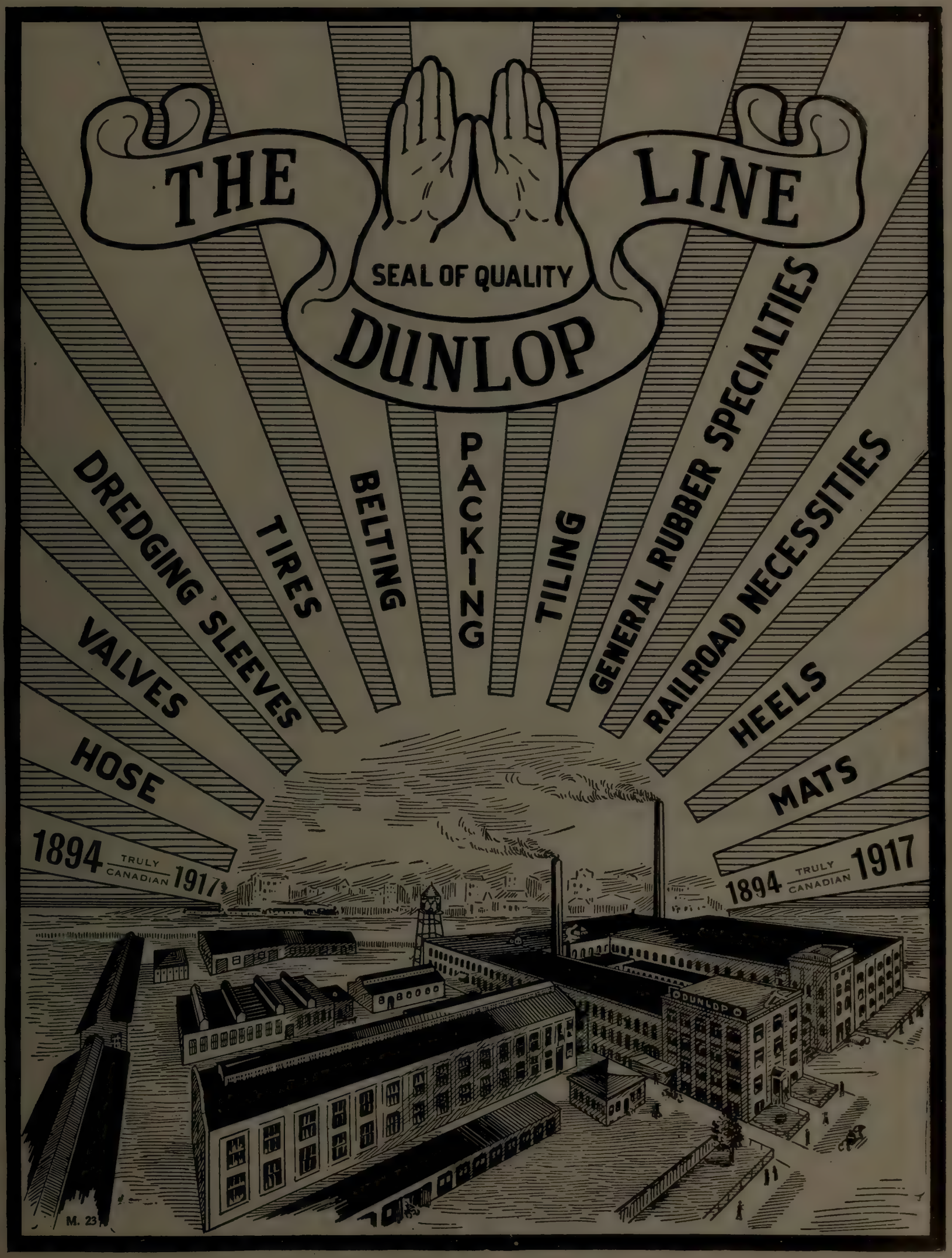
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TERMS OF SUBSCRIPTION

Canada, United States and Great Britain, $2.00 per year, in advance; other foreign countries embraced in the General Postal Union, $3.00.
Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster-General for Canada, for transmission as second-class matter.
Entered as second-class matter July 18th, 1914, at the Postoffice at Buffalo, N.Y., under the Act of Congress of March 3, 1879.

Vol. 37 Toronto, November 15, 1917 No. 22

The Wooden Shipbuilding Industry

No single feature connected with war industries in Canada is of greater importance than the shipbuilding revival which has been produced by the urgent demand for vessels for ocean service. Early in the war vessels upon the great lakes commenced to be called upon for trans-Atlantic work and a slight increase in shipbuilding operations took place, but it was not until the present year that the industry commenced to assume such proportions as it has now reached.

The present issue of the Canada Lumberman will come as a surprise to some of its readers. The magnitude of the wooden shipbuilding industry in Canada has not yet impressed itself upon many of the lumber manufacturers of the country, simply because its operations have not affected their business directly. Although the wooden shipbuilding industry has only been in existence in Canada in its present dimensions, for a few months, however, it is no exaggeration to predict that in one way or another the effect of the great consumption of timber in shipbuilding will be felt, in the near future, wherever lumber is manufactured in Canada.

In this issue we have described some of the leading shipbuilding operations in Canada and have sought to give a good general idea of the industry. This is a task which can be approached only in a general way, but we feel sure that the contents of this issue will open the eyes of many lumbermen to immensity of the shipbuilding industry and its importance both from an industrial and a national point of view.

It would not be right to refer to the shipbuilding industry solely as it affects the industrial life of the people of Canada. Primarily the revival of the shipbuilding industry in Canada is due to the war. Had it not been for the loss of tonnage by submarine attack, and the great demand for ships in which to transport troops, equipment and supplies to Europe, it is safe to say that Canada would have continued to be for many years, if not for all time, a nonentity in the shipbuilding industry of the world. The reasons for Canada's backwardness in this connection are discussed in some of the articles contained in this issue. For one reason and another we have permitted other nations in the past to monopolize shipbuilding and, as a consequence, to control the transportation business upon which we depended for sending our exports to the markets of the world.

The impetus given by the war, figuratively speaking, has turned Canada, and in fact all of North America, into one great shipbuilding yard, and this continent which formerly was of insignificant importance in shipbuilding, is looked upon today as the potential source of vessel supply to save the shipping situation of the Allies. It would not be possible, at this early date, to furnish statistics of the increase in shipbuilding which has taken place. An illustration, however, may be given by the case of Toronto. Before the war, the shipbuilding operations conducted at Toronto were not of much importance. Today the shipbuilding firms in Toronto are turning out a combined tonnage, three times greater than that of the whole of Canada before the war.

The place of the wooden ship in all this activity is interesting. It was thought before the war that the wooden ship was a thing of the past. The advent of the steel vessel seemed to have put the wooden ship out of business for all time to come. Under the pressure exerted by the war, however, the wooden ship has again come to the fore. It is not hard to find a reason for this. In the first place the wooden vessel, economically speaking, is still thought by many people to be a sound proposition, within definite limits. The wooden vessel is staunch, durable and long-lived. From an economical point of view its great drawback is that it cannot be built in such large sizes as the steel vessel and so has had to take a back seat in the shipbuilding programme of the past 25 or 50 years. But the fact that it cannot be used for large vessels is one of its commendations during the present crisis. For small vessels do not present so costly a target to the submarine.

Wooden vessels can be quickly built. Had the government decided to build only steel vessels, it would have taken years to furnish what can be furnished in wood in a much shorter time. Wooden vessels which were not even designed last spring will be crossing the Atlantic before next spring with cargoes for the allies. The fact that so much of the tonnage required is being constructed of wood will also relieve the situation with the building of steel vessels, making it an easier matter to obtain the steel plates required.

As to the future of the wooden vessel, it would be folly to undertake anything in the nature of prediction. Views of directly opposite natures are held by different people on this point, but it does seem reasonable to expect that even if the steel vessel becomes once more the great ocean carrier, the wooden vessel will have its definite field of usefulness in lake and coasting trade. This, however, is entirely beside the question today, because the greatest authorities upon the war have declared that Great Britain and the Allies must have as many ships as can be turned out, both wood and steel.

Early Days of Canadian Shipbuilding

An Outline of the Chief Events Connected with the Industry—Lasalle's "Griffon"—The Royal William—First Days of Lake Navigation

The history of shipbuilding in Canada carries us back to the earliest days of the settlement of North America. Probably the most interesting portion of the history is that which relates to the origin of shipbuilding on the Great Lakes. The pioneer of naval architecture on the upper lakes was LaSalle, the great French explorer. In December, 1678, LaSalle, wishing to navigate the upper lakes, set to work upon the construction of a brigatine of 60 tons. The site chosen for the construction of this vessel was about "two leagues above Niagara Falls," on the south bank of the river. The exact spot is a matter of dispute, but the general belief is that it was about one-quarter mile south of Cayuga Creek, on what is now the United States side of the river.

On December 26, 1678, LaSalle drove the first pin into the keel of his vessel, which was called "The Griffon," as a compliment to Count Frontenac, Governor of Canada, whose arms showed two griffons for supporters. The Griffon was probably a two-masted vessel, and, from such sketches as are available, she must have been devoid of any beauty. She was unpainted and the planks of her hull were rough. The seams and joints were caulked with the fibres of the fir tree and each covered with fir tree pitch.

The vessel was equipped, rigged, and ready to sale on August 1, 1679. She carried seven small cannon, and her crew consisted of 60

La Salle's vessel—built near Niagara Falls in 1678.

sailors, boatmen, hunters, and soldiers. On August 7, 1679, the Griffon sailed out into Lake Erie and inaugurated the navigation of the upper lakes. Her career was brief. She reached Lake Michigan, but was lost somewhere between Washington Island and Mackinaw, on Lake Michigan.

An illustration of the Griffon, after a sketch by L. D. Johnson, is published herewith. This sketch was prepared from early sketches and descriptions. There is much dispute, however, in regard to the actual appearance of this historic vessel, though many authorities believe that the accompanying sketch is a fairly accurate one.

No vessel bearing the American flag was afloat above Niagara Falls before the year 1796. In this year a British-built sloop of 75 tons, purchased from the Northwest Fur Company, appeared upon Lake Erie.

On Lake Ontario the first commercial schooner to make its appearance was the Simcoe, which was built at Simcoe Island about 1793 by the Northwest Fur Company. A second vessel, built in 1798 and called the Prince Edward, was launched at the Stone Mills, on the Bay of Quinte.

In 1795 three merchant vessels were engaged in carrying passengers and merchandise between Kingston and Queenston. Previous to this, in the year 1791, government steamers had commenced carrying passengers on Lake Ontario, and the fare from Kingston to Queenston was two guineas, wines included. The voyage might last anywhere up to one week.

The first lake vessel to cross the Atlantic ocean was the "Cherokee," a Canadian vessel, built and sailed by Capt. Gaskin. The first United States lake vessel to enter into the direct trade with Europe was the Dean Richmond, from Chicago, which made its first Atlantic voyage in 1855.

In 1849 a lake vessel from Cleveland, Ohio, went out of the St. Lawrence and rounded Cape Horn with passengers and freight for California.

Early Shipbuilding in Canada

An interesting description of the rise of the shipbuilding industry in Canada is contained in a book entitled "Eighty Years of Progress in British North America," published in 1863. "Shipbuilding," the book states, "was one of the earliest branches of industrial activity in Canada. As early as 1715 shipbuilding at Quebec was pretty brisk, although there was great reason for complaint that the French would not import the fine timber of the country. The fur trade appeared to monopolize all the attention of the French rulers. Although the British drew large supplies of lumber from the Atlantic provinces, New France contributed no part of her immense forest treasures to increase the naval resources of the great rival of England on the seas. . . . In 1731 M. de Maurepas, the French Minister of Marine, offered a premium of 500 francs for every vessel gauging 200 tons or over, of colonial build, and sold in France or the Antilles, and 150 francs premium for each barge of 30 or 40 tons, if similarly disposed of." In 1752 ten vessels of 40 to 100 tons were built in Canada.

In 1734 there were 52 sawmills in that part of the province lying east of the Ottawa River, the population of the country being 37,252 souls. In 1827, or nearly one hundred years later, the number of sawmills had increased to 565, with a population of 471,876.

Vessel Output at Quebec

Between 1791 and 1861 the number and tonnage of seagoing vessels built at Quebec during decennial periods was as follows:

Year.	No. of ships.	Tons.
1791	12	574
1801	24	3 404
1811	54	13 091
1821	22	2.254
1831	38	6.170
1841	64	23.122
1851	66	41 605
1861	51	*25,546

*The average value of ships built at Quebec is taken at $40 a ton.

From 1787 to 1861 there were 2.939 ships of all kinds built at Quebec, the aggregate tonnage amounting to 890 201. Up to that time the largest ship ever constructed on this continent was built in Quebec in 1825. It was called the Baron of Renfrew, and measured 5.294 tons. Another large wooden ship was built in 1824, measuring 3 690 tons, but these huge vessels were not successful. The enumeration above does not include other vessels which were constructed at the different ports of the Valley of St. Lawrence and sometimes sent across the Atlantic for sale. Many such vessels were also built on Lake Huron, and at Toronto, etc., but in consequence of the general depression in trade after 1857 little of this class of construction was carried on in the lake districts.

In 1723 nineteen vessels cleared from Quebec, containing cargoes of peltries, lumber, and provisions.

New Brunswick's Early Operations

An interesting article on shipbuilding in New Brunswick is contained in "Eighty Years of Progress in British North America," contributed by M. H. Perley. The advantages of New Brunswick for shipbuilding, he says, were apparent to its earliest settlers. Jonathon Leavitt, one of the first settlers in the harbor of St. John, built a small schooner there before 1770. This vessel was named the "Monneguash." In 1773 a large schooner was built at Miramichi and named "Miramichi" by William Davidson, the first British settler on that river. From the building of these two schooners the Province of New Brunswick dates its shipbuilding industry. In the early days the forests of the province supplied timber of large size in any quantity for building ships of the first class. Such ships were constructed chiefly of black birch and larch or hachmatack. The black birch was used for the keel, floor, timbers, and lower planking. Larch or hachmatack was used for all other timbers, knees, and upper planking. American live and white oak were imported for stems and posts of the best

class of ships and pitch pine for the beams. White pine was used for the cabins, interior finish, and for the masts. Black spruce furnished as fine yards and topmasts as any in the world. Elm, pitch, maple, cedar, and spruce were all used in the construction of ships of the second class and small vessels.

Shipbuilding was prosecuted more extensively than elsewhere in the early days at the ports of St. John and Miramichi, where it first commenced. Vessels were also built at St. Andrews and at the various coves and habors on the Bay of Fundy, especially at Teignmouth and Quaco, along the banks of the River St. John for ninety miles from the sea, and at the Grand Lake; also to a considerable extent on the banks of the Petecodiac River, and at Sackville, in the Cumberland Basin.

Within the St. Lawrence vessels were chiefly built at Shemogne, Cocagne, Buctouche, Richibucto, Kaouchibouguac, Miramichi, Shippigan, Bathurst, Dalhousie, and Campbellton.

The "Marco Polo," renowned for her sailing qualities, was built in the harbor of St. John, and was followed by a fleet of other ships equally famous for their strength, speed, and durability.

New Brunswick's Output

The following table shows the number of new vessels registered in the Province of New Brunswick and the tonnage in each year from 1825 to 1860, including vessels built for owners in the United States and sent home under certificate or government pass:

Year.	No. of vessels.	Tons.
1825	120	28,893
1826	130	31,620
1827	99	21,806
1828	71	15 656
1829	64	8,450
1830	52	9.242
1831	61	8.571
1832	70	14.081
1833	97	17,837
1834	92	24.144
1835	97	25,796
1836	100	29 643
1837	99	27 288
1838	122	29.167
1839	164	45,864
1840	168	64,104
1841	119	47,140
1842	87	22 840
1843	64	14,550
1844	87	24,543
1845	92	28,972
1846	124	40 383
1847	115	53 373
1848	86	22,793
1849	119	39 280
1850	86	30 356
1851	99	49 595
1852	118	58.399
1853	122	71,428
1854	135	99,426
1855	95	54.561
1856	129	79.907
1857	148	71.989
1858	75	26.263
1859	93	38 330
1860	100	41,003

The proportions in which the vessels were built in the different parts of the province in 1854 may be judged by the following statement from the ports of registry: St. John, 94 vessels, 56 542 tons; Miramichi, 21 vessels, 13.205 tons; St. Andrews, 7 vessels, 17.771 tons. The vessels shown as registered at Miramichi include all those built in the Gulf. Those registered at St. Andrews include all that were built in Charlotte County.

On an average of £8 sterling per ton, the vessels built in 1854 were worth £795,408 sterling. The amount of daily labor necessary upon the hull and supports of a ship under construction at that time averaged ten days for each registered ton.

Nova Scotia's Shipbuilding Operations

Rev. William Murray contributes an article on shipbuilding in Nova Scotia to the volume referred to above. Great facilities for shipbuilding existed in Nova Scotia, he says. Correct statistics showing the extent to which this branch of industry was carried on in the earlier years are not available. The greater number of vessels in the province were comparatively small and adapted to the coasting trade and trade with the United States. Many vessels were built at Pugwash, New Glasgow, Pictou, Sydney, C.B., Shelburne, Windsor, and other places. These vessels were from 300 to 1,200 tons, and commanded a ready market in England and elsewhere abroad.

The following table shows the extent to which shipbuilding was prosecuted in Nova Scotia from 1852 to1861:

Year.	No. of vessels.	Tonnage.	Value.
1853	203	31,376	$1,557,090
1854	244	52,814	2,546,595
1855	236	40,469	2,240,710
1856	208	39,582	1,852,540
1857	...	.....	.....
1858	151	16,366	757,900
1859	...	.....	.....
1860	233	20,684	852,831
1861	216	23,634	972,448

In 1846 eighty-two vessels were built in Nova Scotia whose tonnage was 12,012. The estimated value of these vessels was $330,000. In 1847 ninety-six vessels were built, the tonnage being 18,445 and the value $553,350. In 1860 sixty-six vessels were built, valued at $309,225.

The same volume contains a short reference to shipbuilding in Newfoundland, which it says was not prosecuted to a very large extent, as the native timber did not furnish materials for ships of the first class. The returns for 1857 gave 88 vessels, totalling 2,427 tons.

The Beginning of Lake Steamship Traffic

A few other outstanding facts in connection with the early shipbuilding industry are of interest. Among these is the history of the steamer "Accommodation," built by Hon. John Molson, at Montreal, in 1809. Her engines were made in Montreal, and she was placed upon the trip between Montreal and Quebec, being the first steamer to operate on the St. Lawrence.

The first steamer upon Lake Ontario was the "Frontenac," launched on September 7, 1816, at Finkle's Point, 18 miles from Kingston. Her proportions were: Length, 170 ft.; beam, 32 ft.; two paddle-wheels of 40 ft. circumference each; registered tonnage, 700 tons. Her machinery was imported from England. She operated between Kingston, York, Niagara, and Queenston, the fare being £2 for the trip from Kingston to Niagara. The "Frontenac" was burned in 1827.

First Atlantic Steamer—"The Royal William"

Probably the most important fact in connection with Atlantic navigation is that which relates to the voyage of the first steamer to cross the ocean entirely under its own steam. The honor of having constructed this vessel belongs to Canada. The vessel was known as the "Royal William," a ship of 1,000 tons and 180 h.p., built at Three Rivers. Her engines were put in at Montreal, and she made the voyage from Pictou, N.S., to Cowes, Isle of Wight, in fourteen days, in the year 1833. This was five years before the voyage of the "Sirius," which has been supposed by some people to have been the first vessel to cross the Atlantic Ocean entirely under her own steam.

Making Ship Treenails

With a gigantic shipbuilding program suddenly thrust upon us, there is opened up a promising side line for some of the woodworking factories that are disposed to take up the manufacture of ship treenails. The specifications for a standard wooden ship, built of fir or Southern pine, call for 16,000 treenails, 1⅜ in. diameter by 3 ft. 4 in. long, and 4,000 1¼ in. diameter by 2 ft. 2 in. long. The preferred woods are locust and eucalyptus, although pine, oak, and maple are used to a limited extent. The material must be sound heartwood, straight-grained and air-seasoned.

Treenail stock may be run in random lengths on a four-side moulder or a dowel machine. Some treenail makers use a variety lathe, rigged up to run without stopping, so that an ordinary man can turn out 200 or more finished treenails per hour. In this case one end of each nail is left square for driving and the other end rounded slightly, or sharpened. Shipbuilders often complain that moulder-run treenails are inaccurate and oversize, so that before using they must be driven through an accurate hole in a slab of steel to size them.

Heavy ship timbers are spiked together with these wooden pins; and planking is fastened into place partly with treenails and partly with iron bolts and screws. Holes for the pins are bored with portable drills, driven by electricity or compressed air.—The Wood-Worker.

Longest Masts in the World

Four of the longest ship masts ever built on the Pacific Coast, if not in the world, are being turned out by Robert McIntosh, a pioneer shipbuilder and repairer, at Portland, Ore. Each of the sticks measures 136 feet in length. They are for shipment to Cape Town, South Africa. Six booms and four gaffs are being built by Mr. McIntosh at the same place, and with the masts will be forwarded to South Africa. The timbers out of which the masts are being constructed were procedar, and spruce were all used in the construction off ships of the sticks is 26 inches in diameter at the butt. They are free from the slightest blemish.

Imperial Munition Board Standard Ships

Fifty-One Now Under Contract in Canada—Details of Construction and Timber Specifications—Work Now Well Under Way

The wooden vessels fitted with steam propulsion, which are building in Canada to the order of the Imperial Munitions Board, on account of the British Government are being built on a general specification, and standard plans for general arrangements and midship sections. These plans are not intended to furnish working details, but are to be treated as general data intended to indicate in outline the class and construction of vessel required.

The details of hull construction, fastenings, etc., in the specification relieve the contractor from the responsibility of employing a skilled staff to work out detail drawings and submit proposals for such details to the Classification Society and to the Board's advisers, who will, however, give all assistance in their power to help contractors, without accepting responsibility for the proper carrying out of the contract. The vessels are to be built to Lloyd's requirements for A1 classification and to British Board of Trade requirements as far as necessary for cargo steamers. The hull's dimensions are to be as follows:—

Length between perpendiculars	250	feet
Breadth, extreme	43½	feet
Breadth, moulded	42½	feet
Depth, moulded	25	feet
Depth over keel	27	feet
Draught for displacement	22	feet
Draught over keel	21	feet
Deadweight on 20 feet maximum draught to Lloyd's summer freeboard, approximated	2,500	tons
Deadweight on 21 feet maximum draught, approx.	2,800	tons

The hull is to be divided by four bulkheads in addition to deep tank bulkheads, viz., collision and aft peak bulkheads, and bulkheads at fore and aft ends of machinery space. All lumber used in construction is to be Douglas fir, unless otherwise specified, but in the case of yards in the eastern and Maritime Provinces the lumber may be such as can be easily obtained, but it must be approved by the Board.

Owing to the danger of corrosion arising in the steel work specified, the keelson logs are not to be of oak except with the Board's special permission.

General Equipment Details

Each vessel is to be fitted with top-gallant forecastle and combined poop and bridge, two masts and derrick posts with cargo gear, four hatches with five steam winches, steam windlass with outfit and gear as required by rules, deep water ballast tank for approximately 400 tons of water, accommodation for officers and crew, bridge house with navigation bridge, to be located at the forward end of the combined poop and bridge, officers and engineers to be housed in engine-room casing.

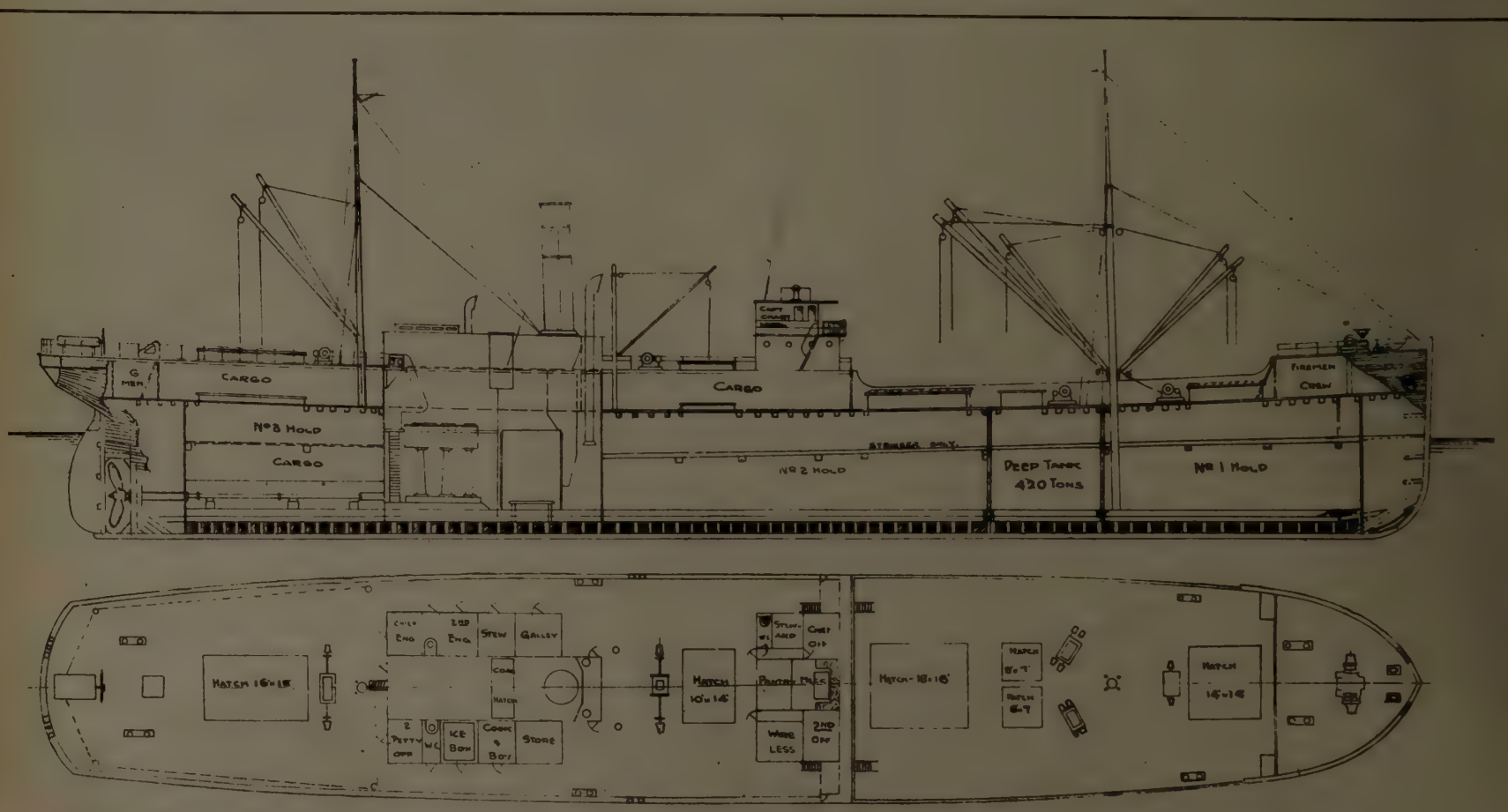
There is to be electric lighting equipment of 7½ kw. capacity, driven by single-cylinder, forced lubrication engine, to be supplied with all cables, fittings, lamps and switchboard.

Each vessel is to be provided with two class A lifeboats, built to British Board of Trade requirements, one on each side of the vessel, each fitted with yellow metal air tanks, compass, etc., and each boat to be capable of taking the whole crew; a dinghy and service boat are also to be supplied, and all boats are to be supported in davits in Classification Society's requirements.

The machinery is to consist of one set of triple expansion surface-condensing engines, to develop 1,000 i.h.p. at sea at 65/70 r.p.m.; cylinders to be approximately, 20, 33 and 54 inches diameter, by 40 inch stroke: condenser with about 1,500 feet cooling surface; independent main feed pump with long stroke simplex type and with control tank under; air circulating, feed and bilge pumps to be driven by levers from main engine; general service pump of duplex type to be fitted to serve as boiler feed pump; main feed pump of simplex long feed type, fresh water pump; ballast pump; duplex 100 tons capacity; exhaust surface type feed heater; evaporator of 15 tons capacity, auxiliary condenser for winches; feed filter of gravity tank type; two boilers of Howden water-tube type, three-furnace design, for forced draught, and fitted for coal or oil burning, and oil-burning installation and pumps to be fitted.

After completion, the trials are to consist of a 6-hour set run at full power, and builder must guarantee workmanship and material for six months after delivery.

Everything is to be supplied to complete the vessel as a full sea-



Diagrams illustrating general arrangement of 2500 ton wooden steamer, many of which are to be built in Canada for the Imperial Munitions Board.

going ship to Lloyd's requirements and to the Board's satisfaction.

Contracts for the construction of 51 vessels of the type described above have, according to a memorandum issued by the Imperial Munitions Board been placed with Canadian shipbuilders in British Columbia (for 33 ships), and on the St. Lawrence, Great Lakes and East Coast (for the balance). It is expected that the engines as well as the hulls will be built in Canada, a number of contracts for engines having already been let in the Dominion. The Board expects to have some of the vessels in the water before the end of 1917. The Board's plans involve as complete standardization as is possible, in order that in the future a maximum production may be realized if this type of vessel proves a success.

The specifications for the vessels provide for B. C. fir being used for construction throughout, the detail of material requirements and grading being as follows:—

Specifications of Material

Description	Lineal Feet	Section Inches	Piece Length
Planking			
1st Garboard	560	9x18	
2nd Garboard	520	8x16	
3rd Garboard	360	6x16	
Planking	8500	6x12	5%, 30 to 38, bal. 40′ and up, ave. 45′
Bilge Strakes	27500	6x10	" " " " " "
Walls and Top Strakes	16000	6x 8	" " " " " "
Rubbing Strake	550	8x10	" " " " " "
Sheerstrake	550	6x12	" " " " " "
Bulwark Rail Strake	5000	5x 8	" " " " " "
Ceiling			
Limber Strakes	500	6x16	30′
Bottom Ceiling	500	10x12	5%, 3 to 38, bal. 40′ and up, ave. 45′
Thick Ceiling	4500	14x14	and up, ave 45′
Side Ceiling	4500	10x 8	" " " " " "
Upper Side Ceiling	5500	8x10	" " " " " "
Poop and F'cle Ceiling	2000	4x10	" " " " " "
Decks			
Clamps	2200	14x12	40′ and up ave. 45′
Thin Clamps	1200	7x14	5%, 30 to 38, bal. 40′ and up, ave. 45′
'Tween Deck Clamps	170	7x14	" " " " " "
'Tween Deck Clamps, Thin	560	14x12	" " " " " "
Main Deck Waterways	1200	14x12	40′ and up. ave. 45′
Poop Deck Stramps and Stringers	1050	12x10	40′ and up, ave. 45′
Poop Deck Waterways	340	12x12	" " " " " "
Main Deck Rail	260	3¼x10	" " " " " "
Stem	1 piece	18x26	45′ long
Apron	1 piece	24x28	42′ long
Keel	320 lg	20x20	Not more than 5 pieces
Keelsons (3)	800 lg	20x20	Not more than 5 pieces
Deadwood	1 piece	18x24	12′
	1 piece	18x24	11′
	1 piece	18x24	14′
Rudder Post.	1 piece	20x20	37′
Propellor Post	1 piece	30x36	37′
Shaft Log	2 pieces	36x20	30′
Rudder Post Backing	1 piece		12′
		20x18	16′
Frames	85 pieces	12x32	28′
	85 pieces	12x29	18′
	170 pieces	21x23	10′
	170 pieces	12x30	9′
	170 pieces	12x30	8′
	170 pieces	12x17	15′
	170 pieces	12x16	27′
	17 pieces	12x14	16′
Beams	85 pieces	14x12	and 14"x13" from 20′ to 42′
Decking	52000 ft.	4x ¼	decking in multiples of 3′ in lengths of 20′ and up, to ave. 30′
	14000	4x 3	decking in multiples of 3′ in lengths of 20′ and up to ave. 30′
Ribbons	3300	5x 5	40′ and up
Cross Bands	20 pieces	2x10	36′ and up
	12 pieces	2x10	38′
	18 pieces	2x10	40′
	28 pieces	2x10	42′
	70 pieces	2x10	44′
Stem Knee	6		1 piece natural crook if possible
Masts			
Derrick Posts and Derricks as may be determined			
Transom	60	12x14	in lengths about 25′
Bulkheads	15000	8x 4	" " " " " "
Stanchions	1000	12x12	" " " " " "
Hatch Sills	600	16x10	
Poop Bridge and Forcastle Beams	60 pieces	12x10	20′ to 42′
Bulwark Rail	600	18x 6	in length of 35′
Shaft Tunnel	100	10x 4	in length about 20′
	300	10x 4	in length about 20′
Shaft Tunnel Beams	220	6x 6	in short lengths
Machinery Foundations	200	20x20	in short lengths

1st, 2nd, 3rd Garboards and Rail Clamps—Must be straight grained, practically clear, allowing a slight scattering of pin knots on face and knots not exceeding 1 inch diameter on heart side. Edges practically free from defects.

Planking, Bilge Strakes, Shear Strake and Rubbing Strake—Must be practically clear, fairly straight grained. Will allow the following defects: 10 to 15 knots not exceeding 1¼-inch diameter, small pitch pockets 4 inches in length when not extending through the piece. Edges must be practically free from defects. Will allow a slight tracing of sap up to 1½ inches on edges.

Wales and Top Sides and Rail Strake—Must be practically clear, fairly straight grain. Will allow 5 to 10 well scattered knots not exceeding 1 inch in diameter and same sap allowances as above.

Note.—All this material when dressed will be surfaced on the outside of the piece and will be placed on the vessel with the heart turned inside. Grade in all cases will be made from the outside of the piece.

Limber, Strake, Double Ceiling, Poop Ceiling, Side Ceiling, Thin Clamps ("'Tween Deck Clamps")—Must be sound, strong, well selected, uniformally sawn lumber, and will admit sound knots up to 2½ ins. diameter, when not clustered. Closed pitch pockets up to 6 inches in length. Small amount of sap up to the full length of the piece when not exceeding 3 inch face or edge.

Bottom Ceiling, Thick Ceiling Clamps, 'Tween Deck Clamps (14 inch Poop Deck Stringers)—This material will be accepted in a lower grade than the above. Will allow on the heart side shakes not exceeding through the piece over 2 inches and on the outside knots up to 3 inches diameter scattered the full length of the piece. Sap running the full length of the piece for 5 inches face or edge.

Waterways—Must be strong sound lumber, well sewn with any amount of small knots when not in clusters permissible. Must have one edge showing practically select face and must not have any slash knots. Practically no sap.

Stems and Aprons.—Best grade of sound, small knotted timber possible from a butt cut. Small amount of cap on any of the four corners permissable.

Keels—Grade similar to thick ceiling. Sound knotted free from shakes, will allow on the top and bottom face of each and respectively heavy wanes, splits and shakes for 10 feet in length and ½ inch of the distance through the piece. Also ½ inch wane on each edge of one face and may extend the full length of the piece.

Keelsons (3)—Grade similar to thick ceiling. Sound knotted, free from shakes. Will allow on the top and bottom face of each and respectively heavy wanes, splits and shakes for 10 feet in length and half of the distance through the piece.

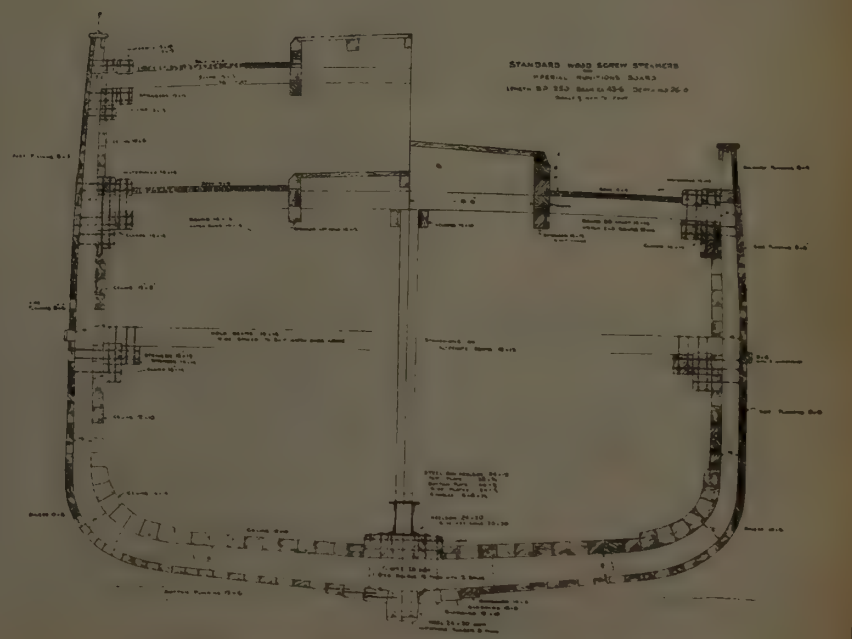
Deadwoods, Rudder Posts, Propellor Posts, Backing Piece—To be good grade similar to waterways, stem and apron, shall be sound, strong lumber free from large and loose knots. Will allow a small amount of sap on all four corners.

Shaft Log—This will probably be ordered in two pieces of 18 x 36 —12 and must be practically clear, straight grained. No sap.

Framing—This material wants to be sound strong lumber. May show wane on all four corners when not extending one-quarter of the length from each end. Will allow any amount of large knots and must be supplied as lengths are called and not in multiples.

Cross Bands—These pieces are to be used in holding the frames together when erected and must be supplied in good strong small knotted lumber. Defects of the piece to be considered in the length of the piece. Sap no defect.

Ribbons—This material may be supplied in hemlock at your option. Must be practically clear, straight grain to stand bending.



Midship section of 2500 ton wooden steamer.

May show any amount of sap and 2 inch face wane on edge or may show wane on both edges.

Promiscuous Common—Shall be ordinary common as supplied to Rail Trade.

Beams—This must be selected strong, small knotted. The fact that these pieces will be dressed four sides must be considered. Grade to be about equal to staging plank.

Decking—To be well sawn and show one edge grain face and calking seam edge free from defects. Under side and lower half of calking edge may show much defects that will not impair its strength.

It is generally understood that the complete specifications excepting the framing must be practically free from sap.

Ships Now Under Contract

The latest list available of contracts let by the Imperial Munitions Board for Standard wooden vessels is as follows:—

Wallace Shipyards, Vancouver, B.C.	6
Foundation Co. of British Columbia, Victoria, B.C.	5
Western Canada Shipyards, Ltd., Vancouver, B.C.	6
Lyall Shipbuilding Company, Vancouver, B.C.	6
New Westminster Construction & Eng. Co., Ltd., New Westminster, B.C.	4
Pacific Construction Company, Coquitlam, B.C.	2
Cameron-Genoa Mills, Victoria, B.C.	4
Quebec Shipbuilding & Repair Company, Quebec.	2
Grant & Horne, Ltd., St. John, N.B.	2
Quinlan & Robertson, Quebec.	4
Three Rivers Shipbuilding Co., Three Rivers, Que.	2
Fraser Brace & Company, Montreal, Que.	4
Toronto Shipbuilding Company, Toronto, Ont.	2
Port Arthur Construction Co., Port Arthur, Ont.	2
Total	51

The above vessels are being constructed under contracts placed by the Imperial Munitions Board for the British Ministry of Shipping. Col. Wm. I. Gear, J.P., vice-president of the Robert Reford Company, Steamship Agents, Montreal, has been appointed Director of Steel Shipbuilding by the Board and has an office in the Transportation Building, Ottawa. The wooden shipbuilding in eastern Canada is being handled from this office. In British Columbia the wooden shipbuilding programme is in charge of Mr. R. P. Butchart, Victoria, B.C., who has been appointed by the Board, with the title of Director, and has established an office for this purpose at Vancouver. Mr. J. W. Troup, manager of the B. C. Coast Steamship Service of the C. P. R., has been loaned by that company to assist Mr. Butchart, and has been appointed Assistant Director.

The general plan of operations followed by the Imperial Munitions Board in connection with these contracts is as follows:—The Board takes over the shipbuilding yard and plant which are furnished by the company. The timber and other supplies are purchased and furnished by the Board, although in some cases this material is furnished by the company, but has to be entirely approved by the Board. Wages and other operating expenses are paid for by the Board. The contracts with the shipbuilding companies are simply for the construction of the hulls. Other arrangements are being made in regard to machinery, equipment, etc. When the hulls have been launched and the contracts completed, a bonus is paid by the Board to the company, which practically amounts to a payment for the use of their yard, equipment, etc., and for the services of the company's office staff.

After completion, the trials of these vessels are to consist of a 6-hour set run at full power, and the builder must guarantee workmanship and material for six months after delivery. Everything is to be supplied to complete the vessel as a full sea going ship to Lloyd's requirements and to the Board's satisfaction.

Sizes of Timbers Required for Shipbuilding

Victoria Lumber and Manufacturing Company's Operations Devoted to Getting Out High-Class Material Needed

The Victoria Lumber and Manufacturing Company, Ltd., Chemainus, B.C., is one of the most favorably situated companies in British Columbia for taking out ship timbers. The company is devoting every effort to fill the demand for this class of material. The capacity of its plant is about five million feet a month. By using every piece possible from selected timbers the company is cutting about 800,000 feet a month for shipbuilding purposes.

The material the company is turning out for shipbuilding is as follows:

Beams—12 x 12 to 18 x 18, in lengths 16 ft. to 42 ft.

Garboards—10 x 18, 9 x 16, 8 x 14, in lengths 30 ft. to 70 ft.

Planking—5 x 8, 6 x 8, 6 x 10, 6 x 12, 9 x 16, in lengths 40 ft. and up (averaging 50 ft.).

Ceiling clamps and waterways—3 x 10, 5 x 12, 5 x 14, 5 x 16, 4 x 12, in lengths 40 ft. and up (averaging 50 ft.).

Framing timbers—12 x 14 to 12 x 36, in lengths 16 ft. to 29 ft.

Clear decking—4 x 4 and 5 x 5, in lengths 20 ft. and up (averaging 30 ft.).

Keels—20 x 24, length 76 ft.

Keelsons—20 x 20, lengths 46 to 80 ft.

Stern—18 x 21, length 42 ft.

Skid log—14 x 24, length 40 ft.

Filling piece—12 x 24, length 36 ft.

Backing piece—24 x 24, length 8 ft.

Rudder post—24 x 24, length 10 ft.

Horn timbers—12 x 12, length 38 ft.

Stern rim—18 x 30, lengths 10 and 15 ft.; 18 x 32, length 16 ft.

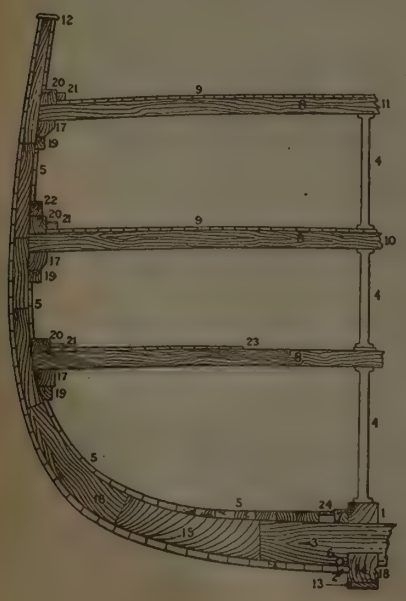
Apron—24 x 28, length 38 ft.

Shaftlog—18 x 36, length 10 ft.

Stern post—30 x 32, length 20 ft.

Forefoot—22 x 44, length 12 ft.

The company secures the material from timber, logged from its own timber lands. It operates its own logging camps and railways.



A Wooden Vessel's Parts

The principal parts of the hull of a wooden ship, as illustrated in Webster's Dictionary, are as follows:—1 Keelson; 2 Garboard Strake; 3 Floor or Floor Timber; 4 Pillar or Stanchion; 5 Ceiling; 6 Limber Hole; 7 Sister, or Side Keelson; 8 Beam; 9 Deck Planking; 10 Main Deck; 11 Upper Deck; 12 Rail; 13 False Keel; 14 Keel; 15, 16 First and Second Futtock, etc., forming the frame; 17 Shelf Piece; 18 Rabbet of the Keel; 19 Beam Clamp; 20 Waterway; 21 Inner Waterway; 22 Spirketing; 23 Partial Hold Deck, the planking extending as far as the figure, 23; 24 Limber Board.

Shipbuilding is amongst the most ancient of arts. As in the idea of bridge-building, the idea for a ship was probably suggested by the floating of a falle ntree bearing some animal upon the water. So, proceeding by way perhaps of logs tied together to make a raft and by means of a hollowed tronk, canoes and coracles were naturally evolved.

The first ship boilt of which we have any description is Noah's Ark. Assuming a cubit to be 18 inches, then the Ark was 450 feet in length, 75 feet in beam, and 45 feet in depth. It was built of gophir wood, or of cypress, and it is worthy of note that in the time of the Greeks this was found, by practical experience, to be, like cedar, eminently suited for parts of a ship under water.

The idea of propelling ships independently of the wind obviously first lead to the use of manual labor in the use of oars. The discovery of the use of steam as a means of propulsion of land vehicles soon lead, naturally, to attempts to utilize it on behalf of floating vessels. It is claimed that the first attempt at this propulsion was made by Blasco de Garay, a Barcelona, in 1583.

Col. J. B. White, in charge of the Canadian forestry operations in France, has returned to Canada on leave. Col. White was very active in raising forestry battalions for England and France.

Wooden Shipbuilding In British Columbia

Thirty-Three Vessels to be Turned Out for Imperial Munitions Board—Other Ships Also Under Contract—Great Activity in B. C. Yards

By A. F. Menzies, M.E.

A. F. Menzies, M.E.

The first ship that was built in British Columbia was undoubtedly a dugout canoe, designed and constructed by an Indian. It was hewn from a log cut in the same forests that are now supplying timber for the wooden ships that are helping to beat the Kaiser.

Until the present extensive shipbuilding programme was undertaken this branch of industry had a precarious existence in British Columbia. Ships, and good ones, too, had been built, both in steel and wood; but the builder had always been fighting long odds.

A large number of internal combustion engined craft had been built, and a few years ago the waterfront at Vancouver accommodated numbers of small yards turning out these craft. They ranged from large and elaborate pleasure cruisers to good sized halibut fishing boats and tugs.

Several steel tugs had been produced, as well as a few ferry and coastwise passenger boats, both in steel and wood. The large fleet of wooden tow boats employed in log and other towing operations were all built locally, in some cases both hull and machinery.

Probably no other country has had such a remarkable growth as British Columbia. It is only a few years since logging operations were being carried out on the sites of the present yards. On the Indian Reserve, in North Vancouver, one can always see a dugout canoe in some stage of construction. And from the Reserve an excellent view of the Lyall Shipbuilding Company's plant can be had.

Plenty of Perfect Timber to be Had

The forests of Douglas fir, with which British Columbia is so well supplied, yield excellent timber for shipbuilding. Sticks as large as 36 inches square by 66 feet long; 18 ins. by 24 ins. by 99 ft.; 20 ins. by 24 ins. by 80 ft. have been cut without sapwood, or other defects. The following, taken from Mark's Engineers Handbook, goes to show that Douglas fir is not lacking in strength.

	Structural Sizes	
	Modulus of Rupture	Lbs. per sq. in. bending
	Air dried	Green timber
Douglas fir	6372	5983
Longleaf pine	5749	6099

A table of maximum spans for wooden beams from the same authority gives Douglas fir a slight advantage over longleaf pine.

For interior work, side grain fir, properly stained, gives a beautiful finish. As to its lasting qualities, if cut in the right season and properly air dried and reasonable care taken in design to see that complete ventilation is possible and that salt pockets are provided, little danger need be apprehended. Of course, like all similar woods, fir is attacked by the toredo if not protected by copper paint, creosote, or other protective coating.

The extensive wooden shipbuilding programme undertaken in British Columbia by the Imperial Munitions Board calls for 27 ships, and to build the ships alone over 40,000,000 feet of lumber will be required. This lumber will vary greatly in size; but must be all select quality. Getting out this material is going to give the mills quite a jolt, but, as one prominent mill manager expressed it, "It is good business, and we are going to take care of it." On account of the high quality of lumber required for shipbuilding purposes a large quantity of a lower quality will be made available.

The sawmills are the oldest mainstay of British Columbia's commerce, and there is no doubt but that they will respond to the Nation's cry for ships, and will furnish the quality and quantity.

British Columbia's Wooden Ship Programme

The 33 wooden ships contracted for by the Imperial Munitions Board are designed to take the highest classification in Lloyd's Register of Shipping. The designs have been worked out by men well versed in the design and operation of all classes of shipping. The length of the boats was decided on as being about the limit it would be advisable to go without recourse to extensive steel diagonal strapping. It was considered better to obtain a relatively larger number of slightly smaller boats than to increase the size and place another load on the already suffering steel market.

These boats are of the well decked type with the poop extended to the bridge deck. They are 250 feet long B. P. by 42 ft. 6 ins. moulded beam by 25 ft. moulded depth. The carrying capacity on a 21 ft. draught of water is about 2,800 tons.

The hull is divided into several compartments by watertight bulkheads, which will materially assist in keeping the vessel afloat should it become damaged. About one and a half million feet of lumber is required for each boat, while for caulking the seams over 350 bales of oakum will be required. For fastenings, galvanized spikes of various sizes, and bolts, both screw and drift, will be required in immense quantities. The following brief description of the more important timbers will give an idea of the sizes of lumber used.

The keel is in four pieces, all 20 ins. by 24 ins., and from 54 ft. to 76 ft. in length. The various lengths being joined together with scarphs 12 ft. long. The keelson is also 20 ins. by 24 ins., and the sister keelsons 20 ins. square. These sticks are in as long lengths as is practicable, and the scarphs are carefully shifted in order to maintain the maximum possible strength throughout. On the top of the wooden keelson there is a steel box girder keelson consisting of top and bottom plates 25 ins. and 40 ins. by ¾ in. respectively, web plates 24 ins. by ½ in., all secured by 6 in. by 6 in. by ½ in. angles.

The frames are doubled 12 in. sided and are tapered from 24 in. at the keel to 11 in. at the main deck. They are spaced 3 ft. centres. There are three garboard strakes, the first being 18 ins. by 10 ins. The planking is all 6 in.

The ceiling in the bottom is 12 ins. by 10 ins., on the turn of the

Plant of Pacific Construction Company, Limited, Port Coquitlam, B.C.—View showing some of the timbers used for framing wooden ships.

Placing the frames—Reel forms ready nearby for another vessel—Pacific Construction Company, Limited, Port Coquitlam, B. C.

bilge 14 ins. by 14 ins. and 12 ins. by 10 ins. and 8 ins. on the sides. In order to avoid local weak spots the butts of the planking and ceiling are well shifted.

On the line of the hold beams there are two stringers each 14 in. by 16 in. and one 14 in. square clamp. The main deck stringer is composed of three strakes of 14 in. by 14 in. These sticks are also in long lengths.

The main deck beams are 14 in. by 14 in., spaced 3 ft. centres, that is, one on every frame. The main deck is of 4½ in. by 4½ in. edge grain. Edge grain timber is used for decking on account of its wearing qualities, also there is no tendency to sliver. The narrow planking is preferable on account of the lessened amount of contraction and expansion to be taken care of at each seam. The upper deck is 3½ in. by 3½ in., also edge grain.

The propeller post is 30 in. moulded by 24 in. sided, being swelled to 32 in. at the shaft line. The shaft log, another large piece, is composed of two pieces of 36 in. by 18 in. To bracket the various parts together a large number of natural knees are used.

There are three cargo holds and one deep tank for water ballast, the holds and tanks being separated by watertight bulkheads. The cargo holds are served by six steam winches operating through 5-ton derricks.

Machinery Equipment

The propelling machinery consists of one set of triple expansion engines which will develop about 1,000 I.h.p. The cylinders are 20 in., 33 in. and 54 in. diameter, having a common stroke of 40 in. The engines are of the usual marine type with a built-in condenser and lever-driven pumps. The crankshaft is built up and is in three interchangeable sections, the diameter being 11⅛ in. A cast iron stern tube will be fitted to carry the propeller shaft through the shaft log. The tube will be provided with a brass bush lined with lignum vitae to form a bearing for the brass liner on the shaft. Lignum vitae, or "Wood of Life," is almost universally used for this important bearing. It contains a natural lubricant; and, when the wear comes on the end grain, lasts for years before appreciably wearing down.

The boilers are to be of the "Howden" water tube type, fitted with a system of heated, forced draft. The draft is obtained from a fan which forces the air round a series of tubes through which the waste gases are passed on the way to the funnel, thus heating it. The heat thus obtained is a clear saving, as otherwise it would have gone up the funnel.

The contracts for the hulls, engines, and boilers are let to different firms, while the work of installation is to be undertaken by the Imperial Munitions Board themselves. For this purpose a large assembly plant is now under construction at Ogden Point, Victoria.

By December several of these boats will be launched, and the middle of 1918 will see the last of the contracted number off the builders' ways.

British Columbia's Shipbuilding Plants

Until recently there were three British Columbia concerns of size engaged in shipbuilding and repairing, both in steel and wood, besides the several smaller concerns engaged on wooden construction only.

A few years ago, Mr. N. A. Yarrow, of the well-known Old Country shipbuilding family, took over the B. C. Marine Railways Company plant at Esquimalt. The old concern had several vessels to their credit, notably the "Nanoose," a 116 ft. tug for the Canadian Pacific Railway Company, the machinery, compound engines 17 in. and 40 in. by 27 in., was also produced by the firm. The "Princess Maquinna," a high class passenger boat, was turned out for the same company. This vessel is 232 ft. 6 in. by 38 ft. by 14 ft. 5 in., and is propelled by triple expansion engines. The "Princess Royal," also a C. P. R. coastwise passenger boat, is another of this firm's products. Some steel barge work on the longitudinal framing system had also been done.

The plant is located near the Esquimalt navy yard, and large repair jobs were often carried out in the Admiralty graving dock. Smaller repairs, and some also of considerable magnitude, were done on the marine railway at the company's plant.

The B. C. Marine Limited, of Vancouver, was at one time a branch of the Esquimalt concern; but on the latter being taken over by Yarrows Limited, became a separate business under the guidance of Mr. Geo. Bushby, who had been local manager for some time.

Yarrows Limited have gone in extensively for the construction of shallow draft vessels for use in Indian waters. These craft have been completely erected at Esquimalt and taken to pieces for shipment.

The Wallace Shipyards Limited

Perhaps the best known figure in shipbuilding circles in British Columbia is Mr. A. Wallace, the moving spirit of the Wallace Shipyards Limited, of North Vancouver. This concern has developed from very small beginnings to receive the honor of building the first deep set steamer in British Columbia, and the firm was in receipt of many congratulations when the representatives of the Imperial Munitions Board took over the S.S. "War Dog."

This vessel was numbered 91 on the company's records, the previous numbers having been bestowed on various craft, including a steel tug 100 ft. long for the Dominion Government Public Works Department, and a couple of large ferries for the city of North Vancouver.

In the past the Wallace Yards have gone in extensively for repair work of all classes, a lot of deep sea work being handled, as well as the local boats. The yard is equipped with two marine railways, the larger of the two being capable of hauling out vessels up to 2,000 tons and 260 feet long. Both the ways are kept constantly busy. At the time of writing the smaller ways were occupied by the "Cassiar," a wooden steamer owned by the Union Steamship Co., which found to her cost that British Columbia rocks are hard. She requires a new stem and repairs to her stearn. The large ways accommodated the Dominion Dredge "Mastodon," which was undergoing her annual overhaul. Extensive repairs are being made to her bucket chain, while the 100-ton sheer legs on the end of the wharf were utilized to lift down some of the upper gearing, on which a new friction is to be fitted.

A reconstruction job of note was also under way, the steel steamer "Bowler," originally the "Safiro," which after a chequered career of 33 years is to be placed in commission again as an auxiliary power vessel. The hull plating was badly pitted and it was decided to apply wood planking to the outside. The top sides were done while the vessel was afloat, under the supervision of Capt. McKenzie, a well-known Vancouver shipping man, while the under water portion is being carried out by the Wallace Yards.

In order to be better fitted to carry out work expeditiously this yard is putting in a modern foundry, construction of which is now under way. The foundry is located on Industrial Island at the mouth of False Creek. This island is reclaimed ground made by the Vancouver Harbour Commissioners, and is being leased by them at very moderate rentals, for industrial purposes. Several other con-

The "Margaret Haney"—Deck view during construction—Built by the Cameron-Genoa Mills Shipbuilders Limited, Victoria, B. C.

cerns have plants on the island, either completed or under construction.

The machine shops of the Wallace Shipyards is a very busy place. In addition to engines for the steel vessels they are building, they have orders from the Imperial Munitions Board for three sets of engines for the wooden ships; also a quantity of rudders and other equipment for the same. The machine shop force was quite proud of its work on the War Dog's engines, these being the first marine engines of any size constructed in the province. The excellent showing made on the trial trip was certainly a consolation for the grief which must have been experienced at times during construction.

The War Dog, being the first ocean-going steamer constructed in British Columbia, naturally created quite a lot of interest. She is a steel well decked cargo steamer 300 ft. long by 45 ft. beam moulded and carries 4,700 tons on a 22 ft. 7 in. draft.

The propelling machinery consisted of a set of triple expansion engines, developing about 1,300 indicated horse power. The cylinders were 24 in., 38 in. and 62 in., with a common stroke of 42 in. The working pressure being 160 lbs. per sq. in.

One of the illustrations shows the War Dog being launched on the 17th of May last. It will be seen from the illustration that the building berth is spanned by a wooden gantry which carries an electric travelling crane. The berth is now occupied by another ship of similar type which will be launched shortly. This vessel's dimensions are similar to the War Dog; but some of the details of design have been altered at the request of the Imperial Munitions Board.

Wallace Shipyards Plant No. 2 was organized to construct six auxiliary schooners for the Canada West Coast Navigation Company. This plant was located on the Fell Fill, a piece of made ground at the foot of Bewick Ave., North Vancouver. The schooners are of the type shown in the illustration of the Mabel Brown. Five of these vessels have been delivered and placed in commission by the owners. They have all carried lumber to various foreign ports. The sixth boat, the "Marie Barnard," was launched on September 29th, and is now being fitted out.

These schooners have a deadweight capacity of 2,550 tons, or 1,500,000 feet of lumber. Those which have had time to complete a voyage have given an excellent account of themselves. They were designed by Mr. J. H. Price, who is now identified with the Cameron Genoa Shipbuilding Company, of Victoria. The boats are of the five-masted, bald headed type, and are 253 feet long by 44 feet beam by 21 feet deep. In their construction about 1,300,000 feet B.M. of lumber was used per boat. While the mainstay for propulsion is the sails, they are all equipped with two 160 b.h.p. Bolinder hot bulb engines, for use in calms and in making port. A speed of from 7 to 8 knots is obtained with the engines alone.

The construction of these boats, as well as a similar number by the Cameron Genoa Company, was undertaken for the Canada West Coast Navigation Company, under the Shipbuilding Bill passed by the late Bowser Government. The total cost of construction has been over $3,000,000, and the resultant gain in tonnage over 30,000.

The No. 2 yard has recently been sold to the Lyall Shipbuilding Company, which will be referred to later. The original concern, however, undertaking to finish the schooner contract.

The third old established shipbuilding company, the Victoria Machinery Depot, has not gone extensively into the present boom. Having a large and well equipped machine shop they were kept exceedingly busy on shell contracts for the Imperial Munitions Board, being the general contractors for the Victoria district.

Besides carrying on an extensive repair business, this firm have several good vessels to their credit. They have also turned out several stern wheel steamers for the up-country rivers and lakes, some of these boats being quite heavily powered.

The Victoria Machinery Depot has recently received an order from the Imperial Munitions Board for a number of "Howden" water tube boilers for use in the wooden steamers.

The recently established yards, with the exception of J. Coughlan & Sons, are all engaged on the wooden ship for the Imperial Munitions Board. The Cameron Genoa Company, of Victoria, who are just completing a six-schooner contract for the Canada West Coast Navigation Company, have four of them to build. The schooners are duplicates of those built at the Wallace No. 2 yard and are for the same owners. The fifth boat was launched recently and is now at the buiders' sheerlegs, having the masts stepped. The sixth vessel will be off the building berth soon and then the four berths with which the yard is equipped will be available for wooden steamers. The wooden steamers in the other three berths are well along, being almost completely framed, and on one, planking has been commenced. In fact, excellent progress has been made by all the yards engaged on the wooden steamers in getting away to a surprisingly quick start. This pace, which there is no doubt will be kept up, is an object lesson to those critics who decried the wooden steamer idea. Had these boats been built of steel, the material, could it have been obtained at

Cameron-Genoa Mills Shipbuilders Limited, shipyard at Victoria, B. C., showing three auxiliary five-masted schooners and one wooden steamer (on the right) under construction for the Imperial Munitions Board—Photo taken on Sept. 8th, 1917.

all, would not have been on the ground yet, and we would have been just that much longer in obtaining the tonnage.

When the four Imperial Munitions Board boats are delivered the Cameron Genoa Company will have the respectable total of 26,500 tons to their credit.

Foundation Company's Operations

Close to the above plant the Foundation Company are busy on a five-steamer contract and have their boats all well advanced. There is considerable rivalry between these two yards as to who will launch the first boat. At present there is hardly a day's work between them. It must not be thought that, on account of youth, these concerns engaged on the wooden steamers are of the mushroom, fly-by-night type. All the firms to which the Imperial Munitions Board have entrusted contracts are backed by solid business men, some of them being well-known from coast to coast.

Both these yards are equipped with crane-type derricks for handling the heavy timbers. The derricks consist of a stout vertical mast securely guyed. At a sufficient distance below the point of attachment of the guys to give clearance to its outer end the horizontal boom is secured. The boom is able to swing in a complete circle and being fitted with a travelling carrier can cover a complete circle, the diameter of which is twice the length of the boom. The hoisting winches are located well back from the building berths, enabling the operator to see signals plainly from the men engaged in placing the sticks.

The Westminster Construction and Engineering Company have four Imperial Munitions Board wooden ships to get out at their yard at Poplar Island, New Westminster. This concern sprang from a combination of the Westminster Marine Railway Company and the B. C. Construction and Engineering Company. Mr. S. Dawe, of the former concern, is general manager of the new venture. The site of the yard is on the upper end of a small island in the North Arm of the Fraser River, and is leased from the Dominion Government. To get supplies in conveniently a private bridge was constructed connecting the plant with the city of New Westminster.

A well equipped plant with four building berths has been installed, and Mr. Dawe expects to have no trouble in completing his work on time. To raise the level of the site above high water mark of the river a quantity of sand was pumped in by the Dredge King Edward, a 20-in. hydraulic dredge operated by the Public Works Department of the Dominion Government. As the sand was removed from a shallow spit running out from the island a double purpose was served.

Injecting new life into a defunct yard was the job undertaken by the Pacific Construction Company when they took over the Coquitlam Shipyard. The two wooden steamers which they are constructing are well under way. Mr. J. L. Davidson and Mr. Stuart Cameron are president and vice-president respectively, while Mr. H. P. Simpson is in active charge of the work.

The plant is supplied with power by the Western Canada Power Company, whose high tension transmission lines from the power house at Stave Lake pass the site on their way to Vancouver.

While this concern has only two ships under contract at present, the yard has available water frontage to accommodate ten building berths.

The Lyall Shipbuilding Company

The Wallace Shipyards Plant No. 2, which was recently taken over by the Lyall Shipbuilding Company, is now equipped with six building berths, and, as the last of the auxiliary power schooners contracted for by the original concern was launched on September 29th, all the berths will be occupied by Imperial Munitions Board work. Four of these vessels are well under way, two of them being completely framed, two nearly as far advanced, while the keel blocks are ready for the fifth and sixth. A spur track from the Pacific Great Eastern Railway, which runs along the foreshore directly behind the plant, supplies it with railroad facilities.

The Western Canada Shipyards are located in the heart of the city of Vancouver, on a site occupied for a long time by the Royal City Sawmills, which were destroyed by fire a few years ago. This concern was organized by Messrs. Armstrong, Morrison & Company, the well-known Vancouver contractors, who have built several notable bridges in the province. Excellent progress is being made on the six wooden steamers contracted for with the Imperial Munitions Board. These boats, together with those built at Coughlan's yard, on the south side of False Creek, will be launched into the deep water channel which has been dredged in the creek by the Pacific Dredging Company, under contract with the Dominion Government.

The largest shipbuilding undertaking in the province is that organized by J. Coughlan & Sons. This firm has been extensively engaged in the fabrication and erection of modern office buildings, as well as operating a brick yard at New Westminster. Recently they have established a large yard for the construction of steel ships, on the south side of False Creek.

Contracts have been accepted for the construction of six vessels of 8,800 tons D. W. The yard has accommodation for four vessels at a time and naturally all the berths are engaged. These boats will be propelled by geared turbines which are being built in the east. The boilers, however, will be constructed in the boiler shop which the firm has under construction beside the shipyard.

No industrial enterprise can be undertaken without causing ripples on the commercial ocean. In regard to shipbuilding, apart from the actual construction of the ships, large quantities of what are finished products to other lines are used.

The auxiliary machinery for a ship is quite an item. Winches and capstans for British Columbia's ships are all being built locally. The Terminal City Iron Works, of Vancouver, supplied the winches for the Canada West Coast Navigation Company auxiliary schooners. These winches are of the central valve type, being handled by one lever, and, when properly arranged on deck, one man can handle two winches.

The North Shore Iron Works, a North Vancouver concern, has developed a winch on the lines of the celebrated Clark Chapman type. This firm supplied the winches for the War Dog and have received further orders from the Wallace Shipyards. The Imperial Munitions Board has also placed orders with them for winches for their wooden steamers.

Steering gears, a very necessary and, to a certain extent, a complicated piece of machinery, for the wooden steamers, are being constructed by the Schaake Company, Limited, of New Westminster, and Yarrows Limited, of Esquimalt. The former concern has been for the past two years engaged in the machining of high explosive shells. The latter has already been referred to.

Forgings, which form an important part of any ship, have, until recently, been rather difficult to obtain in British Columbia. The Vancouver Forge Company have been organized to meet this difficulty, and are now in a position to get out all classes of heavy and light forgings. Among other equipment installed at their forge at Victoria Drive are two large steam hammers, two oil furnaces and a number of open fires, cranes, of course, being provided for handling

Interior view of framework.

Rudder for wooden ship.

Workmen engaged in shipyard of Pacific Coast Construction Co., Ltd., Port Coquitlam, B. C.

Launch of the "War Dog"—the first ocean going steel steamer to be built in British Columbia.

the heavier pieces. This shop is at present busily engaged on rudder and winch forgings for the Imperial Munitions Board.

In order to be in a position to supply large marine boilers, the Vulcan Iron Works have built a modern boiler shop on Industrial Island. A complete equipment of tools has been installed, including a set of rolls capable of bending the heaviest plates used in boiler construction; a hydraulic flanging machine and a hydraulic rivetter.

This firm has, for a number of years, been engaged in the building of boilers, tanks, etc., at their New Westminster shops. A job of considerable size handled by them was the installation of several pipe lines for the Vancouver Power Company at the No. 3 Lake Buntzen hydro-electric plant.

The Vulcan Iron Works have a good order to start their new shops on. They have a contract with the Wallace Shipyards to supply the boilers for the latter's steel ships. These boilers are 15 ft. 6 in. diameter by 11 ft. 3 in. long, and are to carry 180 lbs. per square inch working pressure. The shell plates are 1 11/32 in. thick and a completed boiler will weigh approximately 45 tons.

British Columbia's Shipbuilding Future

That British Columbia will eventually, if she has not already become, a prominent shipbuilding province is a certainty. It may be said that there are three necessities to any enterprise. The place, the nerve and the materials. The splendid natural harbors and rivers of British Columbia are unequalled as locations for shipyards. The nerve of the British Columbia business men has never been questioned. The previous reference to the forests tell of the ample supply of excellent timber. Douglas fir will afford sticks of the largest size required for the construction of wooden ships and beautiful finishing material for the interior of steel boats.

In the ordinary course of events steel is the most suitable material for shipbuilding, and, while British Columbia has at present no steel plant producing iron ores, the ore is here, also the coal from which to make the coke necessary for smelting purposes. Limestone, which plays an important part in the production of pig iron, is also available. It is true the visible iron ore is a magnetite; but who will say science will not evolve a suitable method of reducing it. The ore, the coal and the limestone are all available within short distances of each other and close to tide water. These three gifts of nature, conveniently located, plus nerve, played an important part in making Great Britain what she is. So why should British Columbia not do likewise?

Next to steel, copper, alloyed with other metals, is perhaps the most important metal necessary for shipbuilding. The following figures, supplied by Mr. E. A. Haggen, editor of the Mining and Engineering Record, give an idea of British Columbia's capabilities in this direction.

Production for the year 1916.

	Quantity	Value
Lead, pounds	48,727,516	$3,007,462
Copper, pounds	65,379,364	17,784,494
Zinc, pounds	57,168,980	4,043,985
Coal, long tons	2,084,093	7,294,325
Coke, long tons	267,725	1,606,350

Another of British Columbia's natural resources which will play a larger part in the construction of the ships of the future is the immense water powers. The country is mountainous and the higher levels receive a large amount of snow, which, melting as the seasons change, forms a natural storehouse of power.

Victoria is served by the British Columbia Electric Railway Company from their plants at Coldstream, where 22,200 kw. electric energy is available. Vancouver and New Westminster are supplied by the same concern and also by the Western Canada Power Company, who have plants at Lake Buntzen and Stave River Falls respectively, aggregating 83,200 kw., and as much more capable of easy development. The amount of water power at present utilized is small compared with that available within reasonable distance of the large centres of population.

To build ships, labor is essential, and in competitive times British Columbia has been handicapped in that it is a new country and living is expensive; consequently high wages, comparatively prevail. In times like the present this is not felt; but, on return to normal, this phase will have to be squarely faced. It is not likely, however, that the benefit of the excellent start will be lost and the future will probably see British Columbia building ships with British Columbia products, from forest and iron ore to trial trip, and loading them, too.

Steam Trawlers and Drifters

The Dominion Government is having built in Canada, 36 steel steam trawlers, and 100 wooden steam drifters, of standard British types. The trawlers will be about 125 ft. long between perpendiculars, 23 ft. beam, and 13½ ft. deep. They will have triple expansion engines of about 500 h.p. The work of having these vessels built has been delegated, by the Naval Service Department, to J. W. Norcross, vice-president and managing director, Canada Steamship Lines, Ltd., Montreal, who is acting as Director of Naval Construction, and is being assisted by three of the company's other officials, W. E. Burke, Assistant Manager; F. S. Isard, Comptroller; and H. W. Cowan, Operating Manager. The orders are being distributed among existing shipbuilding plants from Quebec to Port Arthur, and it is probable that one or more plants which have not been in operation for some time will also be utilized. The materials, including engines and other machinery, are bought by the department and supplied to the builders.

The steam trawlers and drifters are built on typical British lines, and are from 110 to 150 ft. long, according to the fishing grounds which it is intended to work. The vessel is rigged with two masts and carries mainsail, mizzen-sail and foresail.

Steam herring drifters are used, around the coast of Great Britain, in the herring fisheries. The modern steam drifter is a smart, sturdy, little craft with two masts, fore and mizzen, the foremast being arranged to lower when the vessel is drifting with the nets, so as to offer less wind resistance. The majority of steam drifters are now built of steel (but those to be built in Canada will be of wood) and vary from 80 to 99 ft. between perpendiculars by about 18 ft. breadth and 9½ ft. depth to top of keel. They are fitted with compound surface condensing engines of from 200 to 250 i.h.p. and attain a speed of from 9 to 10 knots.

The Minister of Marine recently stated that the work on these vessels is progressing satisfactorily, but not as rapidly as had been hoped for. There is difficulty about getting engines and boilers, which has caused delay. A number of vessels have been launched, and it is hoped to have a number of them in patrol service in such places as the British Government desires to place them. The work is being performed in a number of places in Canada. In Quebec it is being done by George Davie, of Levis, in Montreal by Canadian Vickers, Limited, and in Toronto by Norcross and Polson. Work is also being done at Collingwood and Port Arthur, and other points.

Shipbuilding in the Maritime Provinces

Nova Scotia the Pioneer Province — Important Industry in New Brunswick— Romance of the Early Days—the Modern Revival

Written specially for the Canada Lumberman by Elihu Woodworth

THE wooden shipbuilding industry in America was first established at Port Royal, now Annapolis, and, so far as this continent is concerned, may be said to have originated there. Haliburton, in his History of Nova Scotia, tells us that in the summer of 1606 "a barque and a pinnace" were built and launched at Port Royal by Pontgrave. No details concerning the dimensions of these vessels are given, but it may be assumed that they were strongly built and of considerable size, for they were designed to carry back to France Pontgrave and the other settlers who had spent the preceding winter at Port Royal. Pontgrave embarked all his people, except two men who were left in charge of the fort, and they "had set sail and were on their way to France," but they put back to Port Royal on learning that the "ship Jonas" from France "had been spoken off Canseau." Pontgrave returned to France a month later on the Jonas, leaving Poutrincourt in command of Port Royal. Poutrincourt, in command of the barque, made a voyage to Cape Mallibare, now known as Cape Cod, and we are told that "the barque was leaky," and that "having injured the rudder of his vessel," he entered a harbor and erected a forge in order to make repairs. He appears to have succeeded in his efforts, for he returned to Port Royal "in the barque" on the 14th of November, 1606, to join the order of "Le Bon Temps." Next year he "employed his marque in small voyages about the bay to trade for furs," and Murdock tells us that "He also built two barques, and, having no pitch, he collected the gum of the fir trees, caused bricks to be made, contrived a furnace, also an alembic made up of several kettles, and distilled this gum into pitch." In August of that year Poutrincourt embarked all the settlers on his vessels and voyaged to "Canseau," where they joined the Jonas and returned to France. This is a condensed account of the beginning and end of the first shipbuilding enterprise in America of which we have any record, and there is certainly good reason for believing that Nova Scotia is entitled to be considered the pioneer of American shipbuilding. Pontgrave built and launched his vessels one year before the first permanent British settlement was established at Jamestown, Virginia, and two years before Champlain founded Quebec. Hudson discovered the river which was named for him in 1614, and it was half a dozen years later before the Mayflower, with her cargo of furniture and first families, arrived at Plymouth Rock. Even if other settlements had been made before the one at Port Royal, it is not likely that much shipbuilding would have been done, for the first settlers were sadly lacking in facilities for such enterprises. Timber of all kinds was abundant, but it is not at all likely that there was a large stock of canvas and cordage, of cables and anchors. Presumably Pontgrave, like Poutrincourt, had no pitch, and this no doubt explains why his barque was leaky on her first voyage. Under such conditions as then existed it is not surprising that the settlers built few vessels; the wonder is that they succeeded in building any.

There is no record of any further shipbuilding in America for many years, but there is no doubt that, with improved facilities for construction, vessels were built by the colonists from time to time as they were required. That they were built in considerable numbers seems evident from the fact that in 1690 Sir William Phipps, of New England, who had recently taken possession of Port Royal, set sail on an expedition to capture Quebec with "some thirty-two ships in all and over two thousand men." The failure of the expedition involved the people of Boston, who were probably the builders and outfitters of the fleet, in "a heavy financial loss."

It is not surprising that the North American colonists soon developed into a shipbuilding and seafaring people. They came from maritime countries where they had always been accustomed to ships and sailors; some of them probably had been seamen or were descended from seamen, and no doubt there were some shipwrights among them. They settled near the coast where timber was abundant; they had plenty of more or less skilled labor and they needed ships. What was to prevent them from building vessels suited to their wants, and from manning and navigating them after they were built? Take Nova Scotia, for instance, with her numerous harbors, her abundant and excellent timber, her coasts swarming with fish, and with shipping as the easiest if not the only way of communicating with neighboring settlements. Vessels were needed for trading and fishing, and we may be sure that the required vessels were built. These, at first, were small coasters and fishing craft, but when the settlements grew larger and their wants increased larger vessels were built for trading with United States ports and the West Indies. Then, too, shipbuilders found that their vessels had a market value, and many a sturdy craft was turned off as a business speculation. In the early years of the nineteenth century it was not uncommon for a shipbuilder to build a staunch brig, load her with ton-timber, sail her to England and there dispose of vessel and cargo at profitable prices.

Nova Scotia's Palmy Days

The palmy days of Nova Scotian shipbuilding were undoubtedly in the latter half of the last century, but the earlier years were by no means unproductive. In 1826 "the ship Atlantic," a vessel of 330 tons, was launched at Dartmouth and was, probably, with one exception, the largest vessel built in the province up to that date. But larger ones soon followed, and the shipyards of Nova Scotia must have been fairly busy, for in addition to the vessels lost and sold, a parliamentary return in 1852 showed that the registered vessels of the province numbered 2,896, aggregating 176,300 tons, and employing more than 11,000 seamen.

The latter half of the nineteenth century witnessed a marvelous development of shipbuilding in Nova Scotia, but the years of greatest activity were between 1860 and 1890, while all the largest ships, with very few exceptions, were built in the seventies and eighties. The industry was not confined to any section of the province, but was practically universal. From cove and inlet was heard the sound of the shipwright's axe and the caulker's mallet. Labor was abundant, wages, although far below the present rate, were satisfactory, shipbuilders were becoming wealthy and the country was prosperous.

Yarmouth County was one of the first places to become interested in the game. In 1787 her first brig was launched—a vessel of 48 tons. Several small schooners and sloops had been built earlier in the history of the county; brigs of increasing tonnage followed and in 1814 the shipbuilding industry culminated in the launching of a ship-rigged vessel of 300 tons. At the beginning of 1879 the number of vessels on the Yarmouth registry books was 297, with an aggregate of 153,515 tons. According to the census of 1881 the population of Yarmouth County was 21,284. Unless the population was larger in 1879, which is not likely, the Yarmouth people then owned rather more than seven and one-quarter tons of shipping per head. Among the vessels built by or for Yarmouth owners after 1879 were the "County of Yarmouth," 2,154 tons; "Frederick B. Taylor," 1,798 tons; "Ellen A. Read, 1,750 tons; "Vendome," 1,150 tons; "Stalwart," 1,545 tons; and "Vanloo," 1,496 tons.

Yarmouth, however, had no monopoly of the shipbuilding industry. The adjoining counties of Shelburne and Digby turned off many fine vessels—some of them for Yarmouth owners. Annapolis, the birthplace of American shipbuilding, changed her allegiance, but retained her historical industry. King's County built ships at a dozen or more places and some of her shipyards were kept constantly busy for many years. C. R. Burgess, the largest shipbuilder and shipowner in the county, built and owned a famous fleet. He owned at one time five full-rigged ships, averaging nearly 2,000 tons each, besides a number of other vessels ranging from 530 to 1,800 tons. His largest ship, the "Canada," was launched at Kingsport in 1891 and was 2,127 tons register. After many years of successful service she was sold to J. B. King & Company, who converted her into a barge and employed her in carrying gypsum from Windsor to New York. Notwithstanding her twenty-six years afloat, she is still a strong, handsome vessel, and apparently is good for many more years of service.

In the palmy days of wooden shipbuilding Hants County ships were favorably known all around the world, and went wherever ships could go. Bennett Smith commenced building at Windsor in 1855 and continued the business until 1877. During that period he constructed many fine ships, a dozen or more of them ranging from 1,200 tons upward. After his death in 1886 his sons continued the business several years and added some large vessels to the fleet, but they finally gave it up, and sold the whole lot to foreigners at far from profitable prices. Shubael Dimock, who for years was foreman for Bennett Smith, finally started business for himself at Windsor and built several large ships. At Hantsport were the shipyards of E. Churchill & Sons and J. B. North & Son. From 1863 to 1887 the Churchills turned off a dozen or more vessels ranging from 824 to 1,855 tons, besides a fleet of smaller craft. From 1852 to 1894 the Norths built a fleet of fifty-three vessels consisting of ships, barks,

barkentines, brigantines and schooners. Their largest ship registered 1,602 tons, and they had several others nearly as large. Of late years the Hantsport yards that once were so busy have been silent and deserted, but now a new company has bought the Churchill yard and a schooner of about 350 tons register is in course of construction.

Windsor and Hantsport were far from being the only or even the largest shipbuilding localities in Hants County. The business flourished for many years at Maitland, South Maitland, Noel and Selma, while vessels in smaller numbers were turned off in other parts of the county. The industry reached its culmination at Maitland in 1874 when twenty-two large vessels were launched. These included the famous ship "W. D. Lawrence," of 2,459 tons register, the largest sailing ship ever built in Canada. There was a larger one at New York at that time, but she was built to be a steamer and does not fairly count as a sailing ship. The dimensions of the "W. D. Lawrence" were: length of keel, 244 feet; length on deck, 272 feet; breadth of beam, 48 feet; depth of hold, 29 feet; between decks 9 feet, making a depth of 47 feet below the upper deck. The height from the bottom of the keel to the rail was 55 feet. Her main lower mast, of Southern yellow pine, was 100 feet long and weighed 18 tons. The height of the mast from keelson to truck was 206 feet 8 inches. Her main yard was 90 feet long and the length of her main upper topsail yard was 72 feet, with a hoist of about 50 feet. Her spread of canvas was 8,000 yards. Her chains weighed 33 tons and her two largest anchors weighed three tons each. The W. D. Lawrence was successfully employed eight years by her builder and owner and was then sold to Norwegians. Mr. Lawrence, in answer to some unfavorable criticism, published a statement which showed that the big ships paid annual dividends of 22 per cent. on the original investment.

On the opposite shore of Cobequid Bay Colchester shipyards turned out many fine vessels. At Great Village the well-known firm of McLellan & Blaikie carried on a flourishing business for many years. At Masstown, Bass River, Economy and other villages along shore shipbuilding was the chief industry for more than half a century. The business gradually died out, and at present there are not many indications of its speedy revival.

Pictou was one of the first counties to enter the shipbuilding game. We are told that "a vessel was launched from the point above the Gut in the year 1788," and Murdock's History states that in October, 1798, Messrs. Lowdens launched "the ship Harriet, burden 600 tons." This statement is somewhat indefinite. Nowadays when we speak of a vessel of, say, 600 tons, it is generally understood to mean her registered tonnage. In the case of the "Harriet" it may mean her carrying capacity, which in many of the vessels built today nearly doubles their registered tonnage. However, the Harriet was no mean vessel, for we are told she was "pierced for 24 guns and supposed to be the largest and finest ship built in this province." She appears to have been something of a "bluffer" as well, for she carried only four real guns, while the remainder of her armament consisted of "quakers." A famous Pictou ship of the long ago—the "Orquell"—made a trip from Pictou to England which long held the record; another ship—the "County of Pictou"—sailed from Pictou harbor and was never heard from again. The "Royal William," the first vessel that ever crossed the Atlantic entirely under steam, made her first trans-Atlantic voyage from Pictou in 1833, but was not built in Pictou County. And finally, to Pictou belongs the honor of establishing the first steel shipbuilding plant in Nova Scotia—the shipyard of the Nova Scotia Steel and Coal Company at Trenton, which has turned off one steamer this season with a carrying capacity of 1,900 tons, and will soon launch a larger one.

Cumberland County has long been noted for its shipbuilding activities. Cumberland men were among the first to go into the business; they developed it greatly during the boom period; they never allowed it to die out entirely, even when it was very dead in other parts of the province, and they promptly participated in its earliest revival. All along the Parrsboro shore shipbuilding was for a time the leading industry. Vessels were built in practically every creek and cove which afforded facilities for building and launching. At Advocate arbor four or five schooners might be seen on the stocks at once within a stone's throw of each other, with one or two large vessels at West Advocate. The first vessel built at Spencer's Island was the brigantine Amazon, of 170 tons, which was launched in 1862 and was destined after a varied experience to take part in an unsolved mystery of the sea. At one time in her history she was driven ashore in a gale on the east coast of Cape Breton, where she remained all winter and was then sold. Her new owner repaired her, changed her name to Marie Celeste, and finally sold her to a Boston firm. In 1873 she sailed from New York for Lisbon and the number of souls on board was said to be fourteen. This included several passengers besides the Captain's wife and youngest child. In December, 1873, she was towed into Gibraltar by the British ship Dei Gratia, which had found her derelict in the vicinity of the Canary Islands. When found the sails were set and the boats were at the davits. There were no signs of any disturbance or confusion, and in the cabin was a sewing machine with an unfinished piece of work on it. The story of the Marie Celeste has been told all over the world and has given rise to countless theories and suppositions, but no reliable trace of the missing voyagers has ever been discovered. But the shipping fame of Spencer's Island rests on a broader basis than the mystery ship. The Amazon was succeeded by a splendid fleet of large vessels, mostly ships and barques, ending in 1891 with the ship Glovecap, of 1,721 tons, the biggest vessel ever built in the county. These were followed by a fleet of two schooners, one of which, the Coral Loaf, was sunk this year by a U-boat. At Port Greville the Elderking, Hatfields, Grahams, Pettiass, Bentleys, and later the Cochranes, turned out scores of fine vessels. In October, 1879, Captain J. E. Pettis launched the tern schooner J. S. Pettis, of 292 tons register, the first three-masted schooner ever built in Canada. At Parrsboro town many builders launched many vessels of various sizes, and probably, from first to last, no port in the province built more vessels. Many vessels were also built on Chignecto Bay and Cumberland Basin and on the shore of Northumberland Strait, but of these space will only permit this passing mention.

Ships are closely associated with sailors and, as a matter of fact, the finest ship is useless without a master and crew. The men of Nova Scotia took naturally to the sea, and even in the best days of wooden shipbuilding there was no lack of seamen. Many of the old-time shipbuilders were experienced ship-masters, and in drafting their vessels had at least the advantage of knowing what they wanted. Some of them built ships and sailed them; some of them, who had retired from the sea, built ships for others to sail. Among the "Captains courageous" who have sailed Cumberland ships to all the ports of the world were the Knowltons, Morrises, Blinkhorns, Spicers, Merriams, Hatfields, Bentleys, Salters, Howards, McLaughlan's, Durants, Ogilvies and many others. It would be useless to attempt a reference to even a part of the master mariners who have sailed from other parts of the province, for their name is legion. Fifty years ago a Yarmouth lady, a Mrs. Hatfield, had her parlor decorated with the portraits of her six sons, each of whom was master of a fine ship. This, of course, was an exceptional case, but there were many homes in Nova Scotia which sent out from two to four master mariners. These, as a rule, were brave, skilful men who navigated their ships to all the ports of the world, and their "Bluenose" crews were not excelled in skill and daring by any men who ever sailed salt water.

New Brunswick's Shipbuilding Industry

In New Brunswick shipbuilding made an early start and was for many years a leading industry. Ships were built in many parts of the province, but the business concentrated at St. John, and more vessels were turned off in that vicinity than from any other port in the Maritime Provinces. The first vessel built above the Falls of the St. John River, and one of the first of which there is any record, was built for Benedict Arnold, whose memory is not honored over the border. His St. John builder seems to have had reason for loving him, for on account of his being two or three days behind contract time in completing the vessel, Arnold refused to accept her unless a ruinous reduction was made in the contract price. This builder was great grandfather of Hon. J. D. Hazen, late Minister of Marine and Fisheries, and now Canada's representative at Washington. Other builders found it more profitable to build for themselves, or were more fortunate in their contracts, for some of them became owners of fine fleets and all of them made money. The success of the pioneers induced others to emulate them, and at one time St. John shipyards could be counted by the dozen, while some of them turned off two or three vessels a year for many years. Shipbuilding in New Brunswick was a prosperous and growing industry from 1770 to 1884.

Probably St. John's shipping prosperity reached high-water mark in 1876, the year before the great fire. In that year her register showed 805 ships, aggregating 283,073 tons, or an average over 350 tons to each vessel. St. John's prosperity and progress were based on shipbuilding and ship-owning, but she suffered one serious setback from a shipyard fire. In 1841 the Jane Duncan, a ship of 900 tons, was nearly ready for launching in the yard of Owens & Duncan, Portland. One day Mr. Owens found that the holes in the dead-eyes were too small to allow the lanyards to pass through for setting up the standing rigging, so he asked one or two of the men to remain during the noon hour and help him enlarge the holes by burning. Red hot bolts were brought from the blacksmith shop for this purpose, and in some way one dropped among the tarry chips and shavings under the ship. Fire started at once and soon got beyond control. The freshly tarred bottom of the ship and her painted sides were enveloped in a sheet of flames. The tide was out, and a small brig which had just delivered forty tons of lignum vitae on board the ship, was aground and was quickly ablaze. The fire spread to the adjoining buildings and burned over a large area. When the fire was got under it was found that the Wesleyan Chapel and fifty-three houses had been burnt or pulled

down and more than 1,100 people rendered homeless. The fire spread so rapidly and burned so fiercely that nothing could be saved from the houses. The Chapel was partially insured, but there was no insurance on the ship and practically none on the other property destroyed. The loss to Owens & Duncan was a serious one and is said to have amounted to over $60,000—a large sum in those days—but they built many fine ships afterward. Later the yard was acquired by David Lynch, who, in the course of forty years, sent out more than sixty vessels. Among them were the nine large ships and barks built for Howard D. Troop & Son, of St. John, and widely known as the "Troop Fleet." The other vessels built by him included ships, barks, barkentines, schooners, pilot boats, yachts, tugs and steamers. Some of his fleet had more than a local reputation for speed, especially the pilot boat David Lynch. Probably no other man in New Brunswick was so widely known as a skilful and reliable shipbuilder.

St. John's fastest ship was the Marco Polo. She was launched in 1851, and was chartered soon after by the British Government to carry passengers to Australia. Her first voyage under the charter broke all sailing records, for the trips out and back were each made in less than eighty days. During the rush to the Australian mining camps she was frequently unable to accommodate all who applied for passage. The largest ship ever built at St. John or in New Brunswick was the Morning Light. She was built at St. John in 1855 by W. & R. Wright, and registered 2,440 tons, only a few tons less than Nova Scotia's biggest ship. Many other fine ships were built at St. John, but the mere mention of their names, or even the names of their builders, would require too much space. The city of the Loyalists undoubtedly became the shipbuilding and ship-owning centre of the province, but fine fleets were built and owned at Dorchester, Sackville, Moncton, Hillsboro, Richibucto, Newcastle, Shediac and Chatham, while from dozens of other ports around the coast an occasional vessel was turned off. A considerable portion of the shipbuilding records of St. John is now traditional, for the registry books of the port from 1822 to the middle of 1877 were burned in the great fire which destroyed a great part of the city in the latter year.

Shipbuilding has been carried on to some extent on Prince Edward Island, but its development was small and slow in comparison with the other Maritime Provinces, and was devoted chiefly to the production of small schooners for coasting and fishing. Perhaps the largest vessel ever built on the Island was the bark Charles E. Lefurgey, of 936 tons register, which was launched at Summerside in 1884; and probably one-half of the vessels now owned by the Islanders were built elsewhere. One expects Island men to take to the water, but the inhabitants of the "Garden of the Gulf" appear to prefer agriculture.

The best known shipbuilder of his time was Donald McKay, of East Boston. The famous clipper ships built by him, such as the Great Republic, White Squall, Staffordshire, Flying Cloud, James Davies, and Glory of the Sea, were among the largest and fastest wooden vessels ever built and were known all over the world. McKay was born in Shelburne County.

Decline of the Wooden Shipbuilding Industry

The decline of the wooden shipbuilding industry is usually attributed to the development of steam navigation and the competition of big iron steamships. These undoubtedly were powerful factors in stopping the building of big wooden sailing ships, and in finally driving the "windjammer" from the seas, but the decline, as far as these provinces were concerned, commenced before a tramp steamer had even visited our ports. The shipowners themselves were unintentionally responsible for starting the decline. They naturally wished to keep their fleets in good condition, and when one of their ships was nearing the end of its class they prepared to get rid of it rather than have the trouble and expense of having it reclassed. Accordingly the old ship was sold for what it would bring, and a new one was built to replace it. Practically the only customers for second-hand ships were the Norwegians, and as they had the field to themselves, they were very close buyers. They also had the reputation of being able to sail their ships more cheaply than any other owners, and, as the amount of their investment was small, they could well afford to underbid the owners of better vessels. This was particularly the case in the lumber trade, for their vessels could carry lumber when they were scarcely fit for anything else. At one time a large proportion of the fleet carrying deals from provincial ports consisted of ships which had been sold to Norwegians by provincial owners. By selling their old vessels to Norwegians at ridiculously low prices the provincial owners contributed to the destruction of the shipbuilding industry, for they helped to establish a competition which could not be successfully met by new ships. Provincial ships still held their own in distant ports where first-class ships were required, and where the Norwegians did not venture to compete; but with the advent of the tramp steamer even "deep water" voyages became less profitable. The big iron and steel steamships would go to any port that had water enough to float them; while their great carrying capacity and speedy despatch, to say nothing of reduced freight rates, commended them to shippers everywhere. The final stroke was given by the insurance men, who refused to underwrite freight in wooden bottoms except at ruinous rates which the shippers were naturally reluctant to pay. Of course, all wooden ships were not driven from the seas at once, and they never became totally extinct, but owners generally got rid of them as soon as they could, and very few new ones were built. Even the Norsemen and Italians found the old wooden ships were no longer profitable and began to acquire steamers, but in doing so they adhered to their policy of buying old vessels.

In considering the revival of the wooden shipbuilding industry it is well to remember that in some parts of Nova Scotia the wood revival conveys an incorrect impression of the present situation. Lunenburg, famous still for the the fast privateer she sent out during the war of 1812-14, has been building vessels ever since, and the fishing schooners she turns off every year are unsurpassed in strength, speed and beauty. Larger schooners for the West Indies trade have also been built as required, and the demand for them has never slackened, but is steadily increasing. In Shelburne some shipyards have never been idle. Joseph McGill, one of the builders, has turned off a fleet which has acquired much more than local fame. During the past ten years he has built the hulls for nearly two-score steamers of various styles and sizes for the New Burrill-Johnson Iron Company, of Yarmouth. Digby in recent years has built quite a large fleet of fishing and coasting schooners, with a larger one occasionally for off-shore trading. This statement, with slight modifications, is true of several other counties, but it is none the less true that in many of the shipbuilding centres of former years the industry was practically dead, or at least in a comatose condition. Cochrane's shipyard turned out at least one large schooner every year, but there were times when every other shipyard in Cumberland was idle. In Kings, Hants and Colchester Counties, formerly shipbuilding centres, the industry ceased to exist.

Then came the Revival. Four or five years ago a few men in various parts of the country had vision enough to see that vessels larger than was needed for coasting would be required. When the war came and the Government began to commandeer merchant steamers, it was soon found that there was not enough square-rigged vessels left to supply the demand. Then the men who had wisely built big schooners decided to employ them in carrying deals overseas, although the wiseacres protested that schooners were unfit to be ocean carriers. But in spite of all predictions the trial voyages proved successful, and then it was that the revival actually began. Even then its growth was slow, for some builders thought the war would soon be over, while others had been out of business so long that making a fresh start was very like a first beginning. But the growth was sure, and the larger it became the faster it expanded. More vessels were built last year than were turned off the year before; the vessels built this year will probably outnumber the output of the two preceding years, while next year's activities will doubtless exceed anything that has been seen in the last thirty years or more.

The revival in New Brunswick began later than it did in Nova Scotia, but its growth in some parts has been more rapid. One St. John firm has contracted with the Imperial Munitions Board to build two steamers with a carrying capacity of 3,000 tons each. Other leading firms are engaging extensively in shipbuilding, and all around the coast are indications of a return to the industry which once made the province famous. Of course, it is impossible at this writing to tell just how far the movement will spread, but it will not be surprising if next year witnesses a shipbuilding renaissance that will equal the busiest days of the old-time industry.

Mark Twain, in concluding an account of his visit to Rome, boasted that he was the only man who had ever written on the subject without quoting "Butcher'd to make a Roman holiday." In like manner I may claim to be the only one who ever wrote about ships and shipbuilding without saying something about "Sailing the Seven Seas." One writer allowed the Seven Seas to break in three times in an article that would cover about half a page of this magazine. Now I am not quite sure which the seven seas are, nor where they may be found, and some of the other writers might be equally puzzled, but the phrase is aptly allitrate and softly sibilant, and it requires considerable self-restraint to keep from using it when writing of those that go down to the sea in ships.

At the conclusion of the investigation into the newsprint price situation, Commissioner Pringle, on October 29th stated that the government might very well assume control of the newsprint paper industry for the duration of the war in order that the publishers may be assured of a steady and adequate supply of paper.

The death of Mr. John Archie Bulmer, of Montreal, one of the oldest lumbermen in the city, is announced. He retired several years ago from the lumber business.

Quebec Shipbuilding—Past and Present

An Account of the Industry's Early Days, Its Rise and Decline and an Outline of Its Present Revival

By George Gale, Author of "Quebec Twixt Old and New"

DOUBTLESS there is no subject of such paramount importance to-day throughout the Dominion of Canada as that of building ships, both of wood and steel, in order to relieve in a large measure the alarming state of affairs that prevails at present, due to the scarcity of British and neutral tonnage. It is, in a word, a mighty effort on the part of the man power of Canada, of the North American continent, in fact, to offset the German submarine menace by assisting in the building of vessels, and thus aid in conveying the immense cargoes of freight offering in food and munitions to the civil and military population of the British Isles, France and their allies in Europe, who are engaged in the unparalleled life and death struggle in the cause of liberty and humanity against our enemies on land and sea as well as in the air. As a consequence, many ancient and abandoned shipyards from the Atlantic to the Pacific, where the whirr of the saw, the blow of the maul, and the ring of the mallet from the busy workers, once familiar sounds, have not been heard for a decade, are to-day the scenes of the greatest activity. The hearts of the few remaining veteran ship carpenters, caulkers, etc. (one may speak with authority for this district, at least), who loved their old callings and were very proud of their work years ago in the shipyards, are again made happy as a result. Many of these workmen, although long past the age for further practical activity, are delighted to know that the art of shipbuilding has revived and that wooden vessels, once the pride of the ocean, that had to all intents and purposes almost entirely vanished from the seven seas, have again been placed in commission as freight carriers, and, as in former days, are once more bowling across the briny deep loaded to their utmost capacity.

Abandoned hulks, moored to rotting wharves, and committed to rust and decay long before the war, have been repaired and fitted out to carry freight, while sailing vessels which were converted into coal hulks have been overhauled, re-rigged with tall spars and sent to sea once more. The majority of the ships are sailing under the schooner rig with three or more masts. Although not so speedy, vessels thus rigged are found to be able to ride the waves satisfactorily and are much cheaper to handle as to crew and other details than the square rigged ship with its immense spread of canvas of royals, sky sails, studding sails and stay sails. Quebecers have always been very much interested in the wooden ship industry, which, at one time, directly and indirectly, gave the majority of our population the means of a livelihood and was in the early days responsible for such popular suburbs as St. Roch's, St. Sauveur, Stadacona, Hedleyville (now Limoilou), Cap Blanc, etc. It was a question of living near the water front, within easy access of almost the only labor that was then offering. In fact, shipbuilding at one time was what the shoe factories are, or rather, ought to be to-day. Almost from the dawn of the past century, for a period of over sixty years at least, when the depression was first noticed, it was the most important industry in Quebec, providing employment for thousands of persons and at a time when work was most required, during the fall and winter months. Not only the ordinary carpenters, but the ship smiths, sail, rope and spar makers, riggers, shantymen, framers, ship chandlers, mill owners, as well as lumber and general merchants, in fact, all classes of the community shared in its prosperity. It has been truly said that at one time in Quebec more than half the men were engaged in shipbuilding, and nearly all the rest in doing business with them. Consequently, when the trade finally fell away, owing to low freight rates, dear money and the advantage of steam over sail, a period of suffering for our laboring classes followed. Even the shipbuilders themselves were not exempt from the hard times, and while many found themselves on the verge of bankruptcy the majority of the others were poorer by far than when they went into the business. It might not be amiss to mention here that whether with the axe or saw the French Canadian workman was an expert at the calling and formed the bulk of the skilled labor to be found in a shipyard. He had a reputation from the earliest years for his splendid workmanship. Later hundreds, if not thousands, of these men deserted the ancient Capital and made their way to the shipyards on the shores of the Great Lakes, at Owen Sound, Collingwood, Chicago, Detroit, Toledo, Cleveland, Buffalo, Oswego, etc., where work at their trade continued brisk and wages high.

Activities of Early Days

During the years that the trade boomed, however, there were scenes of great activity, especially from November to May, in the half hundred or more yards on both sides of the St. Charles River, as far as Stadacona—where Jacques Cartier wintered his three small ships on his second voyage to Canada in 1536—in one direction, and in the other at Gingras, behind the historic pile known as the General Hospital, in which, for almost 225 years, the aged poor have found a refuge, and where the wounded French and English soldiers in 1759 and those of Arnold's army in 1775 were tenderly succored by the devoted nuns. John Munn's yard was located at the foot of Grant Street. The small park, presently bounded by St. Roch, St. Joseph, Desfosses and St. Paul Streets, even in the recollection of some of our older inhabitants, was used as a shipyard. The present St. Ann railway depot occupies the site of a yard formerly the property of Messrs. Nicholson and Russell. Many others were located at Cap Blanc, Wolf's Cove, Sillery, Cap Rouge, Pointe aux Trembles, Levis, Lauzon, Island of Orleans, etc. As a result scores of vessels, in the early days as small as one hundred tons, but latterly some of two thousand tons burthen, of magnificent design, were fitted out for sea in the various yards. During one of the winters of the Crimean war period, in the fifties of the past century, eighty-two ships, barks and

Hall's Saw Mills at Montmorency Falls, near Quebec, many years ago. These mills were once reputed to be the largest in the world.

brigs were built in the yards on the banks of the River St. Charles and left their ways gracefully to the delight and amidst the cheers of thousands of Quebec's population. In 1864-65 one hundred and thirteen vessels of all sizes were constructed in the various shipyards, while in the following winter there was the usual sight of five ships on the stocks at the same time in the Dinning yards at Cap Blanc, namely, the Friga, Mora, Grace Redpath, Helen Drummond, and the Richard. In Allan Gilmour & Company's extensive yards at Wolfe's Cove, where some of the most expert tradesmen in the shipbuilding industry were employed—but now, alas, have nearly all passed away—four vessels on the stocks, in close proximity to one another, were often to be seen. The handsome clipper ships from Quebec, loaded with square timber, deals, staves and lathwood, made many a record passage to England and the continent in the olden days, and were the pride, not only of the Atlantic, but of the Quebec men who assisted in their designing and construction. Many million feet of pine deals, carried in some of these vessels every season, were cut at the Hall sawmills at Montmorency Falls, said to be the largest mills in the world at that time. They were on the site now occupied by the textile factory. There were no less than six mills side by side and two known as "tidal" mills in operation, with six miles of dockage, where hundreds of workmen found employment. Two of our prominent fellow citizens, Mr. J. G. Scott, formerly general manager of the Quebec and Lake St. John Railway, and now president of the Board of Trade, as well as Mr. D. H. Pennington, lumber merchant and Harbor Commissioner, started their business careers with the Hall concern. Other mill owners at the time were William Price, the father of the industry in the Saguenay district, whose mill was located on the Levis side of the river, even in the early days of the past century, as well as Bennett & Company, Hamilton Bros., and Ritchie & Cull, in addition to the Jones mill at Hedleyville.

Quebec's Celebrated Clippers

The best known Quebec built clippers were the Illustrious, Trenton, Tea Taster, Boomerang, Lady Dufferin, Shooting Star, Hilda, Brunelle, White Rose, Minnehaha, Rosemeath, Chillian Wallah, Volage, etc., some of which proved marvels for speed and endurance on the high seas for years. The Shooting Star, built in Lee's yard at Hare Point, of one thousand four hundred tons burthen, made the passage while on her maiden voyage from Quebec to Liverpool, with a cargo of deals in fourteen days. The beautiful clipper Brunelle, called after her builder, logged over fourteen knots an hour and left many swift sailers and even steamers far astern, while the Rosemeath, with a full cargo, made the passage from Quebec to Glasgow in fourteen days. Other instances of fast Quebec sailers might be mentioned as well as wonderful sea races recorded if space permitted. The best known day's run for a clipper ship—the Flying Cloud—not a Quebec built vessel by the way, was four hundred and thirty-three and a quarter statute miles from noon to noon, a record of travelling over the waters of the Pacific that could hardly be surpassed by the modern greyhounds propelled by steam to-day. To see a ship with her studding sails set alow and aloft was considered by our forefathers one of the seven wonders of the world.

The Island of Orleans, a few miles below Quebec, was quite a centre for shipbuilding at one time, but not for many years past. Fine square rigged vessels, the envy of their captains and crews, were launched from yards at L'Anse du Fort, near the ferry landing at Bont de l'Isle—where the Huron Indians sought in vain a refuge from their murderous enemies, the Iroquois, in the middle of the seventeenth century—and at St. Patrick's Hole, located within a mile this side of St. Laurent. It was during the years 1823-24 and 1824-25 that two vessels, the Columbus, of 3,690 tons, and the Baron of Renfrew, of 5,294 tons, both built by Charles Wood, were launched from the yard at L'Anse du Fort. They were the largest wooden vessels ever built in this city or district, or, for that matter, anywhere else, and were constructed solely for the conveyance of square timber to the English market. The Baron of Renfrew was 303 feet in length, with a beam of sixty feet, a hold of thirty-five feet and five decks of seven feet each. There was considerable difficulty experienced in launching the vessels and both were wrecked before returning to Quebec, entailing a loss of over five million dollars on the owners, who were English capitalists.

The Industry Reviewed

The shipbuilding industry has, however, once more been revived at the Island of Orleans after a lapse of many years. Some time since a party of patriotic business men, all but one of them strangers to Quebec, however, determined to try the experiment of building ships in this locality, and thus, in a small measure at least, perform their "bit" in responding to the appeal of the Premier of Great Britain for ships, and still more ships, besides bringing Quebec into line with the other old shipbuilding centres of the Dominion. The gentlemen in question, who deserve the thanks of our population and to receive every encouragement for their spirit of enterprise, are Messrs. James Playfair, of Midland, Ont., J. A. (Major) Gillies, of Braeside, Ont., R. A. Carter and G. A. Wood, of Montreal, and last but not least, our own fellow townsman, Mr. Martin P. Connolly. The company, which is known as the Quebec Shipbuilding and Repair Co., leased for a term of years a portion of the spacious property known as the Maritime Shipyard, situated at a convenient distance from the ferry landing at St. Laurent, where there is a fully equipped modern shipyard and repair plant, including a sawmill and other machinery to expedite the work. Mr. D. McLaughlin, a veteran though still active shipbuilder from St. John, N.B., who constructed many a wooden flyer in the olden days in the Maritime Provinces, and takes pride in his calling, is in charge of the work, and has, as assistants, several trained men from his own province. The bulk of the work, however, is being performed by the inhabitants of the Island, who, although novices for the most part, are very apt pupils, judging from the manner in which they wield the broad axe already, and go about their work as though to the manner born. The vessels are schooner rigged, of the two deck type, with four masts and auxiliary power, and a dead weight capacity of 2,100 tons. Their length over all is 223 feet, beam 42 feet and depth of hold 20 feet, while they are being built in accordance with the requirements of Lloyd's register of shipping and classed A1 for fifteen years. The wood used in the construction of the vessels is all Canadian, and includes oak, rock elm, birch, black spruce and Douglas fir from British Columbia, the latter for the masts.

The work on one of the vessels, christened the "M. P. Connolly," and called after one of the energetic directors of the company—the ceremony being performed by Mrs. Connolly—was sufficiently advanced to be successfully launched the latter part of October in the presence of a large number of spectators. The ship is now moored in the inner basin at Quebec, where the masts and rigging are being placed in position and the vessel otherwise made ready for sea before the close of navigation. This is the first wooden craft of any size built by private capital or otherwise in the province for some twenty-five years, and Quebecers are consequently very proud of the fact.

In addition to their yard at the Island of Orleans the Quebec Shipbuilding and Repair Company has secured a strip of land on the River St. Charles side of the Louise Embankment from the Quebec Harbor Commissioners and are presently engaged in converting the place into a suitable shipyard. Here they intend starting at once, with a large staff of workmen, on two wooden freighters of some 2,500 tons each, this time for the Imperial Munitions Board.

On the north side of the St. Charles River, opposite the city, Messrs. Quinlan & Robertson, who for some years past have been employed in dredging and making other extensive improvements in the St. Charles River for the Federal Government, but were obliged to suspend operations until after the war, have devoted a portion of their extensive plant to the building of ships. They have a contract with the Imperial Munitions Board for the construction of four large wooden steam freighters of the standard size. A large number of men are at present employed in their yards and the two vessels on the stocks are already well advanced. It is expected that at least three of the four ships will be ready for launching at the opening of navigation next spring.

Two other freighters of a similar type are being built at Three Rivers by the Three Rivers Shipbuilding Company, while Messrs. Fraser, Brace & Company, of Montreal, who have a contract for four, are busily engaged on the work in their yards bordering on the Lachine Canal.

There are rumors that other firms, both in Quebec and outside districts, will shortly start building vessels of a somewhat lesser tonnage also for the Imperial Munitions Board.

Industry in Need of Government Encouragement

What is urgently required to stimulate the wooden shipbuilding industry still further and thus add largely to the tonnage that is of so much value and importance at the present time, as well as for years to come, is some action on the part of the Ottawa authorities in the way of the payment of bonuses. The Government should encourage the construction of small wooden freighters, cargo carrying vessels of, say, 200 tons and more with the most liberal bounty. Then the industry would not be confined to the larger centres solely, as at present. With some advantage offering mill owners of say Chicoutimi, Rimouski, Matane and other outlying river ports could co-operate with farmers and in a few months build quite a fleet of the smaller class of vessels, for which there is an abundant supply of timber almost at their very doors. These vessels could carry thousands of tons of fish, if nothing else, from Newfoundland to some parts of Canada all the year round, and to Quebec and Montreal during the season of navigation at least. This would be of immense benefit to the people of the Dominion and a great factor in solving the problem of the present excessive cost of living. It would also, no doubt, in a large

measure, assist in hastening the day when the German submarine peril would be overcome.

The late Narcisse Rosa, a former well-known French Canadian shipbuilder, who constructed many a splendid vessel in his day, in Quebec, gave the number of vessels built in this port from 1797 to 1896 as 2,542, of 1,377,099 tons, and valued at $55,119,600. But shipbuilding had its origin in New France as early as 1666, when Intendant Talon had a vessel of one hundred and twenty tons constructed on the banks of the St. Charles River, while many keels were laid in succeeding years. Patrick Beaton built a full rigged ship, christened the Neptune, of 363 tons and measuring 117 feet in length, in 1797, and it is the first one recorded since the conquest. The last wooden vessel built in this district was the barkentine White Wings, of 430 tons, constructed by William Charland and launched from his yard at Lauzon in 1893. As late as 1887, however, the Titanic, a ship of 1,405 tons, was built by George T. Davie, at Levis. It was as early as 1839 that John Munn, the most prominent shipbuilder in Quebec at one time, launched the largest vessel hitherto built here, a ship of 1,267 tons, named the United Kingdom. The Quebec, Rowland Hill and John Munn, the latter four hundred feet in length, three well-known passenger steamers of the early period of the past century, that plied between this port and Montreal, were also built by Mr. Munn.

Among the leading men in the shipbuilding trade in the port of Quebec from the early forties of the past century down to the construction of the last vessel in 1893, were the following:—Messrs. J. Campbell, J. Ross, W. Patton, G. Pemberton, H. Lemesurier, E. Oliver, W. Lampson, H. Gowen, Nicholson and Russell, J. Bell, H. Sharples, J. Dunn, W. Power, J. Leaycraft, T. Kelly, T. Oliver, J. Wilson, E. Burstall, H. Burstall, G. H. Parke, John Munn, J. Jeffery, James Oliver, A. Gilmour, J. Tibbitt, G. Black, W. Cotnam, J. Nesbitt, P. Valin, W. Russell, M. I. Wilson, J. Perrie, R. Jeffery, H. N. Jones, E. Sewell, J. Lemelin, W. Price, C. Sharples, J. Goudie, J. Gilmour, W. Stevenson, D. Burnett, N. Rosa, T. Lee, W. Baldwin, I. I. Samson, E. Trehan, Peterson and Shaw, H. Dubord, T. Oliver, J. E. Gingras, G. Lemelin, G. Usborne, J. Sharples, P. Brunelle, H. Dinning, J. Lane, McKay and Warren, G. T. Davie, W. Ray, R. McCord and Son, Dunn and Samson, P. Maxwell, J. G. Ross, Lachance and Flanagan, C. Wilson, W. Charland and F. X. Marquis.

Reminiscences of Early Days

Shipbuilding had its origin in New France as far back as 1666, when Intendant Talon had a vessel of one hundred and twenty tons built in Quebec, and with the view to establishing shipbuilding as a regular industry in this country, issued orders to the Seigneurs to reserve all the oak growing on their domains for that purpose. Several vessels were built in 1671, while in 1687 one was built by the local merchants. In 1672 Talon built a record vessel of four hundred tons. These vessels were wholly for commercial purposes. After Talon's departure the industry fell away and no shipbuilding was carried on save in a very small way and to meet purely local wants until 1732, when Intendant Hocquart took up the question, established a shipbuilding yard of four or five acres on the River St. Charles, with a dry dock on the opposite shore, and ten merchant ships were constructed there that year and eleven the next, with a stimulus of a bonus from the King of France, graduated according to tonnage for vessels of sixty to two hundred tons. These seem to have been the largest vessels of any kind with one exception built until 1739, when orders were received from the French King to try the experiment of building war vessels. Accordingly, the construction of a corvette of five hundred tons was begun with an engineer named Neree Levasseur acting as contractor or builder for the King. On the 4th of June, 1742, the first transport for the French navy, the Canada, was launched here, amidst great rejoicing, and was sent to Rochefort, France, with a crew of eighty St. Malo men. She was loaded for the voyage with boards, iron and oil. In the spring of 1744 the Caribou, of seven hundred tons, carrying twenty-two guns and a crew of one hundred and four men, left the yard on the St. Charles and sailed for France in July, followed in 1745 by the "Castor," of twenty-six guns and two hundred men. This was the first warship built for the protection of Canada's trade and to guard the Gulf of St. Lawrence. The "Martre," launched in 1747, was the last war vessel to be built on the banks of the St. Charles River, as it was found that the water there was not deep enough, even at the highest tides, for the increasing tonnage of war vessels. After the purchase of several building lots and preparing the ground for shipbuilding, a yard was opened at the Cul de Sac, at the site of the old Champlain market, where the Transcontinental Railway offices now stand in the Lower Town, and the first vessel built there was the "St. Laurent," of sixty guns, in 1748. In 1750 the "L'Original," of seventy guns, followed, but she broke her back on leaving the slip. Timbers from this ship were picked up from the river bottom some years ago. "L'Original" was in turn followed by the "Algonquin" in 1753 and the "Abenaquis" in 1756, the last two being small, lightly armed corvettes. The frigate "Le Quebec" was launched in 1757. After this the construction of the bigger war vessels was given up here, the French naval authorities having found that the "Caribou" and the "St. Laurent" did not come up to their expectations, owing to the inferior quality of the wood used in their construction. But mercantile vessels of relatively small tonnage compared with those in our own days continued to be built here down to the conquest. The wood used in the construction of sailing and war vessels in the early days was white and red oak, elm, birch and spruce. The masts were brought from Bay St. Paul, some miles below Quebec, and the Lake Champlain district. The majority of the vessels, especially the war craft, were manned by crews brought out from France, while the foremen carpenters, riggers, block makers, etc., were also sent out by the French Government in order to instruct the Canadians in the work. The iron work for the ships was cast at the St. Maurice forges, located some seven miles from Three Rivers, Que., which were opened in 1732. The forges were worked for some years by the French Government and guns as well as projectiles were cast there. After the conquest the English military authorities took possession of the forges, but in 1767 leased them to a local company for a term of sixteen years. In 1783 Hon. Conrad Gugy was the lessee and he was followed in turn by Messrs. Munro & Bell, Matthew Bell and others. The forges have not been in operation for a number of years. The old style box stoves, household utensils, as well as the farm implements used by the early settlers, were also cast there down to an early period of the past century.

Future of Shipbuilding in B. C.

By John Eadie, Manager Dingwall Cotts & Co., Vancouver

IT is not easy, in reply to a request for one's opinion on the prospects for shipbuilding as a permanent industry in British Columbia, to write anything that can in any way be considered authoritative or reliable, mainly because the conditions which will obtain in the future are so entirely unknown. Nothing can be more gratifying to the people of Western Canada than the way in which the resources of the Pacific Province have been mobilized to build both steel and wooden ships for the Empire's needs. It can only be hoped that the same adaptability and readiness to use available resources will be available to deal with conditions arising after the war, and that the very considerable obstacles in the way of establishing a permanent industry may be overcome, but it would be foolish not to recognize that obstacles do exist.

As regards steel steamers, the distance from the sources of supply of steel will always militate against British Columbia, when there is any kind of competition in the world's markets, even assuming that the high labor costs can be overcome by the reduction of the cost of living and a consequent reduction of wages. If there were any immediate prospect of steel being rolled in British Columbia this position would be entirely different and British Columbia might readily become a large shipbuilding centre, but this must necessarily be a long way off, and meantime freight rates on steel and other material from eastern points must remain a handicap against British Columbia.

When we consider wooden shipbuilding the position as regards material is reversed, as probably the most suitable shipbuilding timber now available is obtained right on the coast. It is, however, problematical whether the wooden vessel, either steamer or sailing ship, will be economical in cost of construction and in operation, as compared with the steel steamer, after the war. In normal times the cost of wooden construction has been higher than that of steel, and the same comparison may be anticipated in the future. On the other hand, the demands on the world's output of steel will be tremendous for many years after the war, and it may well be that, with the increased experience and facility gained by British Columbia yards in carrying out the present wooden ship programme of the Imperial Munitions Board, the costs of building wooden vessels may be lower than steel for longer than is sometimes anticipated. In this case, and if the type of wooden steamer at present being built be found strong and suitable in every way for the carriage of dry and perishable cargoes, there is a future for the building of these vessels for the carriage of Pacific Coast products to their various markets, as this will be the last market in the world to feel the effect of a reduction in freight rates, and we shall be thrown on our own resources to arrange for the transportation of our own goods. With the development of the lumber export trade, too, there will probably always be a demand for small wooden schooners, possibly with auxiliary engines, for the transportation of lumber, these vessels being owned either by the mills or by lumber exporters. The

lumber trade, after the lesson of the past three years, are not likely in future to take the chance of the open tonnage market, and to see their entire transportation facilities withdrawn whenever there is a world shortage of tonnage.

Everything depends on the energy and enterprise of our business interests and of the people in general, not only on the coast but in the interior, to take advantage of our natural resources and facilities and personal skill, and to organize and develop them to the utmost degree of efficiency to ensure access to markets for Canadian products. This will probably mean a much more extensive interest in shipbuilding and shipowning by our people of the coast, and even of the prairies, than has hitherto been the case, as the prairie interests are as much involved as those of the coast towns in seeing an efficient shipping trade built up from our ports.

The Importance of Canadian Shipbuilding

Wooden Vessel Construction the Most Important Business for Canada To-day

Transportation of Supplies Must Be Rendered Certain

Written specially for the Canada Lumberman by Edward Harper Wade, Quebec, P. Q.

Edward Harper Wade

THERE is a prevalent belief and widespread feeling throughout the Dominion that sending men to the front is of such paramount importance that all other considerations shrink into comparative insignificance, and that, failing an adequate supply of volunteers to make up half a million effectives so sent, conscription and winning the war are practically synonyms, or equivalent expressions. Many are even quite honestly somewhat hysterical respecting what seems to them the one necessity, and talk about the abandonment of our boys in the trenches, or the refusal of adequate support to our overseas troops, as though anything of the kind were possible or contemplated under any circumstances by any party. The present is certainly a time for prompt action, but no less for careful consideration. It must be remembered that those who pump water and lay and protect the hose are just as necessary in extinguishing a fire as those who actually fight it.

Canada is called upon to assist in winning the war in four different ways, not one only—in men, in munitions, in food, and in ships—and their relative importance may at this present time be in the reverse of the order in which they are named. It is for those that the Canadian electorate entrusts with the government of the country to apportion to each individual his or her task, as the services of each may be most effectively applied to advance the end in view—the one end that all good Canadians, without distinction of party, race, or province, know well must be accomplished—the final and decisive defeat of the Germans and the utter destruction of their military power.

Our boys at the front must be provided with abundant munitions and supplied liberally with the necessary food and clothing. To enable this to be done it must be possible to send forward from Canada all they require, and this cannot be done without vessels. Provision must be made for bringing back those who are incapacitated for further services, not only in fulfilment of our duty to our best and bravest, but to relieve the United Kingdom from an unnecessary burden at a time when her food resources are strained to the utmost.

Harry Lauder, who has given in the cause of right and justice his only son, dearer to him than anything else in the world, has recently been appealed to by the government to use his influence in inducing consumers to limit the household use of bread to the absolutely necessary. In response to this appeal he has told the people how serious the present position is; that they may yet know what it is to find available food supplies inadequate for the requirements of the population; that they may yet have to face not only shortage but starvation and that it is quite possible our brave boys may have to go over the top hungry when attacking the Germans. He told them he spoke the truth as he knew it, and as a simple man of the people, speaking in all honesty to his fellow-countrymen.

Transportation the Key to Security

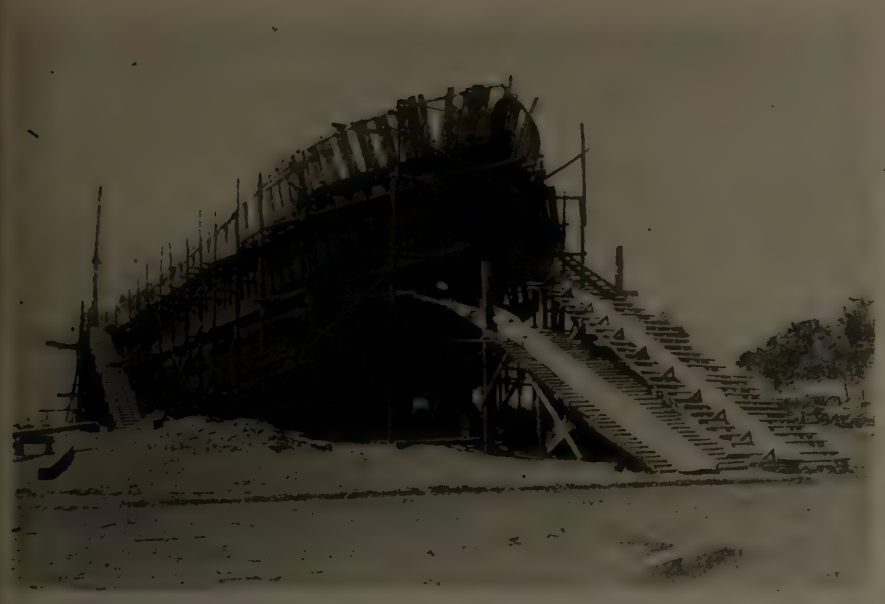
It is becoming increasingly clear that the wheat harvests of the world are not adequate for even the present restricted consumption apart from the problem of transportation, and for a considerable proportion of the earth's population absolute famine is within measurable distance.

However great the supply of munitions and the production of foodstuffs on this side of the Atlantic may be, it is certain that unless both can be delivered in Europe they are useless for winning-the-war purposes. As war preparations progress and develop in the United States, a great army of trained men will materialize, but it is in France and Flanders they are required—not North America. Already they are going forward in considerable numbers, but again the problem of transportation presents itself. It must not be forgotten that every man sent over must be fed from this side, and every body of men kept adequately supplied with munitions from the same source. It has been stated that each soldier sent will entail the sending of his weight in munitions and supplies every thirty days if he is to be efficiently provided for, so that for long to come there will be an immense fleet required in that connection alone—a fleet that is now under construction in the United States, but that will largely be required for that special purpose, so will not relieve to any marked extent the present existing shortage of tonnage for other requirements.

The position under the submarine menace now shows signs of improvement, but is still very uncertain. Against a loss of about four and a half million tons in the past eight months, new construction, completed and launched, is less than a million tons in the same time. It is only by reducing the losses and increasing the output that the Allies can hope to bring to naught the German hope of starving out the United Kingdom and other European opponents, and so rendering ineffective the armies opposed to them on the various battle-fronts. The possibility of reducing the losses is involved in uncertainty and governed by conditions not yet under control, for though the position is decidedly more promising it is by no means assured. Increasing the output is within the power of every shipbuilding country, under efficient government control and management assisting and directing private business enterprise.

The supply of fighting men seems assured by the entrance of the United States into the war; the sustained production of munitions seems amply provided for, but the supply of food, and especially the means of transportation of men, food, and munitions across the Atlantic, and of wheat, wool, and other necessaries from Australia, New Zealand, India, Argentina, and other places from which the voyage is long, is now the most important problem. How far it now exceeds the very momentous one of supply of fighting men is shown by the warning that Sir Joseph Maclay, controller of shipping of Great Britain, had addressed to the United States, that they must not keep on

Interior of wooden vessel during construction, showing rough temporary timbers. Quebec Shipbuilding & Repair Company, Isle of Orleans, P.Q.



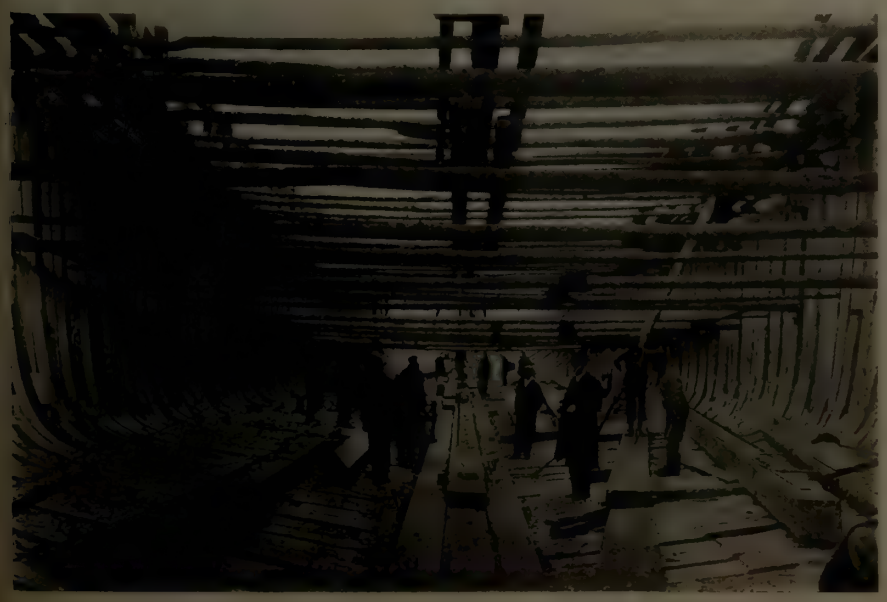
The "Martin Connoly" built by the Quebec Shipbuilding & Repair Company and launched on October 28th, 1917.

View showing deck construction on a wooden vessel at plant of Quebec Shipbuilding & Repair Company, Isle of Orleans, P.Q.

sending men to the front unless they can provide corresponding shipping. Ships, not men, seem to be the great need of the Allies, according to Sir Joseph Maclay, who is the official spokesman on the subject for Great Britain. There are already, according to Sir Joseph—and his words have been most forcibly supported and confirmed by Lord Northcliffe, who represents the United Kingdom on this side of the Atlantic—more men in training in North America than can be made use of in France until the world's shipping has been tremendously augmented.

Steel Ship Construction Only Possible on Small Scale

Canada, unfortunately, is able to do but comparatively little in constructing steel steamers at the present time, for although possessed of great coal deposits in Nova Scotia, almost at tide water, within easy distance by sea from practically unlimited supplies of iron ore in Newfoundland, also at tidewater, such development as has taken place is utterly inadequate to meet the present demand for ordinary purposes, for even now the rails are being taken up on some of our Canadian railways to meet urgent war requirements in France, which would not be the case if our manufacturers could supply them. Canadian manufactured structural steel for shipbuilding purposes is not to be had in any adequate quantity, and steel plates for steamer construction are practically unobtainable. Canada is now paying the penalty of neglect of her unequalled resources for the production of iron and steel, resources that, properly and fully developed and utilized, would have made her a great shipbuilding country—a leading producer of steel steamers as she formerly was of wooden sailing ships. A carefully devised and wisely regulated system of bonusing, safeguarded by the reclamation and refund of the bonus on exported products might have done much. Government assistance in obtaining the necessary large capital to enable private or company development might have done more. The iron and steel industry of Canada, assisted and fostered by bonuses on production for a time, made steady progress till the end of 1913, when the record figures of 1,128,000 tons of pig iron and 1,168,000 tons of steel ingots and castings were produced, but in 1914 these figures fell to 738,000 tons and 828,000 tons respectively. Two Canadian companies, in their Newfoundland holdings, own possibly the finest deposit of hematite iron ore in the world. One hundred and forty-four thousand tons of this were shipped to Germany and Holland in 1912-13. There is no reason why there should not have been an abundant supply of steel instead of the present shortage. It is of little use to look to the United States for a supply of shipbuilding steel, as there is no available surplus in that country, and the export is restricted by government licenses and permits.



Exterior view of wooden vessel during construction, framing nearly completed, at plant of Quebec Shipbuilding & Repair Company, Isle of Orleans, P.Q.

Wooden Ships—Canada's Opportunity

It is therefore evident that mainly by the building of wooden ships can Canada do her part in meeting the submarine menace and most effectively assist in winning the war. On the Pacific Coast, where material is readily obtainable, considerable progress has been made. In the Maritime Provinces good work is being done. In the shipyards of Quebec the sound of the adze and mallet is again heard, and building is progressing; but the present total is deplorably short of what might reasonably have been expected, or at least hoped for. The impossibility of obtaining adequate supplies of suitable timber is one difficulty; organizing and reviving in a somewhat altered form an industry that had seemingly passed away for ever is another. Still, all things considered, a fair commencement has been made.

It is certain that for long after the end of the war freights will remain at a high level, and there will be ample employment for a far larger fleet than in all probability will be in existence when peace is declared.

Let no one suppose that those engaged in the building of vessels, the production of wheat and other necessaries of life, or the manufacture of munitions and war material, are not doing as good work, and as necessary towards winning the war, as those who volunteer or are conscripted for active service at the front, though we can never have for them the same feeling as towards those who have faced death on our behalf. Conscription for shipbuilding or wheat growing may eventually be found as requisite, or even more necessary, than conscription for active service. Lord Northcliffe states that between the Dominions and the Homeland, Great Britain has approximately seven and a half million people in and about the war. To this must shortly be added continually increasing American contingents. Then there are the armies of the Allied nations. All these are more or less dependent on food and supplies from abroad, as are the civil populations of the various European countries. Providing and delivering the necessaries of life and means of warfare to meet European wants may be more important than the addition of another hundred thousand to the millions now driving back the Germans, but that is for all Canada to consider. Considerations, opinions, and feelings must be made subservient to winning the war.

In any case, it is clear that wooden shipbuilding is at the moment by far the most important business in which Canada is engaged or can engage. Each vessel constructed and launched is a valuable contribution towards accomplishing the desire of every Canadian heart, which is, without distinction of race or party, the final and decisive defeat of the Germans and the utter destruction of their military power as the necessary preliminary to that perfect and lasting peace which will follow winning the war.

The steamer Keith Cann, launched recently at Shelburne, N.S., is the largest steamer yet built in Shelburne and the first vessel to be constructed by the Shelburne Shipbuilders, Ltd. The steamer is owned by H. D. Cann & Son, the veteran steamboat owners.

Wooden Shipbuilding in New Brunswick

Its Splendid Past and Its Modest Present — New Activities Indicate Possibility of Important Growth in Near Future.

Written specially for the Canada Lumberman by R. E. Armstrong, Sec. St. John Board of Trade

TIME was when wooden shipbuilding was as the breath of life to New Brunswick. With an almost unlimited demand for wooden ships, with suitable timber everywhere and workmen a-plenty, shipyards sprang up in scores of places throughout the province. Wherever one went the sound of the workman's adze and maul assailed the ear, and wherever it was possible for ship to sail, there the "wooden walls" of New Brunswick might be found.

The list of wooden shipbuilders who operated at St. John was a long one, including such names as Jonathan Leavitt (who built the first sailing vessel at St. John in 1770), Simonds & White, Gilmour, Rankin & Co., George Thomson, W. & R. Wright, Stackhouse & McLachlan, John Clark, Owens & Duncan, Gass & Stewart, Capt. Cruickshank, Nevins & Fraser, Olive Brothers, Storms & King, Oliver Pitfield, the McDonalds, Thomas E. Millidge, Brown & Anderson, Wellington Brothers, McFee, John Stewart, Joseph K. Dunlop, S. J. King, D. V. Roberts, Hilyard Brothers, Harry Rowan, William Ruddock, David Lynch, W. & J. Lawton, Edward McGuiggan, John Tennant, and others.

At Tynemouth Creek, J. S. Parker and others built ships; at Black River, J. & R. McLeod and others; at Gardiner's Creek, W. & R. Wallace; at Quaco, James Moran, A. Parks & Son, William DeBowe, the Rourkes, Wisharts, and others; at Rockland, R. A. Chapman; at Oromocto, Richard Hawes; at Harvey, Gaius Turner; at Clifton, C. W. Flewelling; at Moss Glen, Gabriel Merritt; at Rexton, Jardine & Co., and throughout the province many others whose names have been forgotten.

Among the prominent owners of wooden ships in New Brunswick were Troop & Son, who owned a great fleet, sailing in every part of the known maritime world; William Thomson & Co., Taylor Brothers, George F. Smith, Oliver Emery & Co., Scammell Brothers, Samuel Schofield, George Berteaux, George Carvill, George McLeod, L. McMann & Sons, Daniel J. McLaughlin, Mills & Jago, Luke Stewart, Donald Carmichael, John M. Taylor, Barton Gandy, W. J. Davidson, George W. Gerow, Vroom & Arnold, George Thomas, Joseph A. Likely, James Kennedy, Zebedee Ring, George Eaton, John Purdy, R. A. & J. Stewart, Oulton Brothers, Alexander Yeats, Robert Robertson & Sons, C. McLauchlan & Son, Henry Vaughan, D. V. Roberts, J. C. Brown, W. W. Turnbull, Pritchard & Son, Joseph W. Penery, Edwin Frost, George F. Baird, Fred E. Sayre, C. A. Palmer, Hall & Fairweather, T. S. Adams, H. J. Olive, and many others.

St. John's Great Shipbuilding Days

Shipbuilding reached its zenith in New Brunswick in 1854, when 135 new vessels, registering 99,426 tons, were added to the provincial fleet, most of these being placed on the St. John registry books. At that date there were on the registry books at St. John 582 vessels, of 119,965 tons.

In 1876 St. John stood forth in the list of shipowning ports of the world. At that period it owned 805 vessels, aggregating 280,073 tons. From that date wooden shipbuilding began to decline. In 1894 the number remaining on the registry at St. John was 488, of 111,888 tons. Year by year the shipping glory of the port continued to fade, until last year there only remained on the register 326 vessels, of 34,841 tons.

Some famous ships were built in New Brunswick. Nehemiah Beckwith, grandfather of Hon. J. D. Hazen, Minister of Marine and Fisheries, built the Lord Sheffield for Benedict Arnold, in 1786. In 1850 the Benjapore, the largest wooden ship then afloat, was built by W. & R. Wright.

About the same year the ship Marco Polo, destined to become one of the most famous ships of her day, was launched from the Smith yard at Courtenay Bay, St. John. She didn't get off to a very good start, as she grounded in the launching and was considerably strained. She made up for this disaster later on by smashing many ocean records. Captain "Bill" Thomas, it is recorded, skidded her across the pond in fifteen days. Under command of Captain Forbes, another driver, she entered the Australian trade, and made some record-breaking passages. This great wooden ship finally closed her career as a collier, leaving her bleaching bones on the shores of Prince Edward Island.

The age of steam soon drove the wooden sailing ship to the wall, every yard in the Province of New Brunswick being as silent as the grave in 1884. Wooden shipbuilding was gone, as everyone believed, forever, leaving behind it, however, a wealth of tradition that could not easily be forgotten. Briefly, this was the New Brunswick of the past as a shipowning community.

To-day's Shipbuilding Industry

What can be said of the New Brunswick of the present? Not very much so far. With the brilliant record of bygone days in mind, and with the fear entertained by many that the government would probably requisition ships as fast as they were built, it was found very difficult to reawaken interest in the construction of wooden craft in New Brunswick. The St. John Board of Trade, impressed with the need of more ships, approached the federal and provincial governments and urged the granting of a bonus or some other form of encouragement to prospective shipbuilders, but there was nothing forthcoming from either quarter.

Finally, after months of anxious effort on the part of shipbuilding promoters, the general contracting firm of Grant and Horne decided to take the plunge. This courageous young firm secured a contract from the imperial director of shipping to build two wooden steamers of a carrying capacity of 3,000 tons. Their plans were approved by English Lloyds, and a yard was secured at Courtenay Bay, upon the site of one of the old shipyards. A mill and moulding loft were soon erected, the ground graded and piles driven for "ways," and a few weeks ago the keel was laid for the first of the ships. It was made the occasion for a simple ceremony, the mayor and president of the Board of trade joining in a complimentary address to the contractors, the chief magistrate afterwards driving the spikes in the keel.

The keel of this new ship, composed of Douglas fir from British Columbia, is 250 feet long. The breadth of the ship is 43 feet 6 inches; depth, 25 feet. With turbine engines it is expected that she will develop a speed of 9½ knots.

The working model does not display the graceful and symmetrical curves which were so marked a feature of the hulls of the clipper ships of half a century ago, but for the most part there is little deviation from the old methods of construction. The saw, however, plays a more important part in the shaping of timbers, although the axe and adze have yet their work to perform.

The keelsons, which are the main backbone of the ship, are a combination of steel and wood, instead of the all-wood keelsons of the old days. There are the main centre keelson and two assistant keelsons of wood, laid side by side, and on top of these is a vertical box girder of steel. The old-fashioned wooden futtock or "crook" is used in the building of the hull. Every precaution is being taken to ensure rigidity and strength. The ship will be supplied with two masts, fitted with powerful derricks. There will be no sails whatever.

In addition to the Grant & Horne firm, there are two other corporations in St. John that are making preparations for the construction of vessels.

The St. John Shipbuilding Company, which has been incorporated, with a capital of one million dollars, and which numbers on its directorate several prominent Canadian steamship men, proposes to establish a yard at St. John and another at Bathurst. This company, which intends to engage in the construction of a fleet of small tugs for the Imperial Government, has been delayed in the accomplishment of its task by the loss of plans, which were on board a torpedoed ship. Duplicate plans have been supplied, and it is expected that a definite announcement will be made by the company in a few days. Thomas Nagle, of St. John, is manager of this company.

D. A. Saker & Co. is the name of the other shipbuilding firm in St. John. This firm has established a yard on what is locally known as the Strait Shore, about midway between the harbor proper and the falls. A mill and moulding loft have been constructed, and preparations are now being made for the ways upon which the first vessel is to be built. It is the intention to start upon a large schooner.

At Moss Glen, fourteen miles from the city, on the Kennebecasis River, Peter McIntyre, of St. John, has a schooner of 425 tons framed up, L. P. McLean being the master builder. The dimensions of the vessel are: 136 ft. length of keel, 35 ft. breadth of beam, 12 ft. 6 in. depth of hold. About twenty men are at work upon this vessel. With the exception of a little Southern pine, native woods are being used entirely in her construction.

At Alma, Albert County, C. T. White & Co., lumber merchants, have made a start on a large schooner.

The Eureka Shipbuilding Company, Ltd., composed of Frank

Ingersoll, Joseph E. Gaskill, Frederick S. McLaughlin, Frank L. Lakeman, and N. Mark Mills, all of Charlotte County, N.B., with a capital stock of $32,000, has been incorporated. This company has two schooners under construction at Meteghan, N.S.

The Rosebank Shipbuilding Company, of Chatham, is preparing to construct vessels. They expect to start building at an early date.

The International Shipbuilding Company, with a capital of $2,000,000, has been incorporated, for the purpose of building steel and wooden ships at Newcastle, N.B.

Up to the present time this constitutes the sole development of wooden shipbuilding in New Brunswick.

In the adjoining Province of Nova Scotia the art of wooden shipbuilding has not been allowed to languish as in New Brunswick, so that when the demand for increased production in ships came, builders were able to respond more quickly than in New Brunswick. At the present time Nova Scotia is quite a busy hive of industry in this respect.

"The Mabel Brown"

The accompanying illustration is from a photograph of the motor-driven five-masted schooner "Mabel Brown," launched by the H. W. Brown Company, Ltd., Vancouver, B.C., who constructed the vessel. The "Mabel Brown" is the first of the auxiliary wooden schooners built in British Columbia, and on her maiden trip carried 1,534,000 feet of lumber for the Government of New South Wales. The vessel

This ship carried 1,534,000 feet of lumber to Australia on her maiden trip.

is built throughout of British Columbia Douglas fir. She took on her load in ten days at the plant of the Victoria Lumber and Manufacturing Company, Ltd., Chemainus, B.C., and occupied about 45 days in reaching Sydney. The freight charges on her cargo amounted to $45,000. The "Mabel Brown" is the first of many similar vessels which are now being built in Canada.

The Pacific Marine Review, in an article on British Columbia Shipbuilding, says:—A year ago there was not a large ship being built in the province of British Columbia and the industry did not represent an output of much more than $50,000. Today there are $27,000,000 worth of steel and wooden vessels under construction or contracted for.

While the shipbuilding industry of the province is by no means new—wooden ships were built here as far back as 1788—its firm establishment as one of the chief assets of the West Coast of Canada has taken place within the year. It is of course due to the ever-increasing demand for ocean tonnage.

It was at Nootka Sound that the first wooden ship was built in 1788, since when a number of small vessels have been constructed from time to time. With the growth of Vancouver and Victoria, shipbuilding and repair yards were established and several steamers and sailing ships of medium dimensions produced.

A year ago, however, there was not a single large vessel either building or contracted for in British Columbia. The Aid to Shipping Act, passed by the Conservative Government early in 1916, drew attention to the facilities available for shipbuilding, and soon afterwards contracts were placed for the construction of ten auxiliary-power wooden schooners.

This particular type of vessel costs about $150,000, and is similar to the motor sail ships that have been built in the Pacific States. They are 225 feet long, 44 feet in beam and 32 feet deep. Bolinder engines of 160 h.p. drive twin screws.

In order to assist communication between Eastern and Western Canada through the Panama Canal the Dominion Government decided to establish a line of vessels and have already let contracts for two ships of the auxiliary schooner type.

This started the activity, and contracts amounting to $18,000,000 had been let up to a short time ago. The Imperial Munitions Board has also let contracts for a further 33 wooden steamers in this province.

The total programme of construction now amounts to more than $27,000,000 in value.

U. S. Pacific Coast Timber Schedule for Wooden Ships

The lumber schedule is governed strictly by the following rules:

1. Dimensions of timbers in the form to be used in the ship are net, after surfacing. Material must be sawed large enough to surface down to these dimensions. Dimensions and quantities in the rough, in accordance with the usual milling practice, are given separately for the information of manufacturers.

2. The specification of "selected common" Douglas fir means the following, as quoted from the Standard Schedule of Grading Rules, etc., for Douglas fir and associated species, No. 6, issued by the Pacific Lumber Inspection Bureau, 1912:

"Selected Common—This is a grade selected from the grade of No. 1 common, and shall consist of lumber free from defects that materially impair the strength of the piece, well manufactured, and suitable for high-class constructional and structural purposes or the purposes for which it is intended, including bridge timbers, floor joists, ship timbers, factories and warehouses, designed to carry heavy loads, etc."

The following specifications, taken from the same schedule, shall govern timber used for ship plank and decking:

"No. 1 Ship Plank—Including outboard planking, garboards, wales, clamps, rails and lumber for similar purposes, shall be firm grain, free from large knots or other defects impairing its use for the purposes intended.

"Will allow small, tight, hard knots when not on face corners or calking seam. Bright sap on face side edges not exceeding one-quarter the width or thickness. Small pitch pockets not extending through the piece. Said defects to be considered in connection with size of piece and its quality otherwise. Must be well sawn.

"Decking—Shall be uniformly sawn, firm grain, and free from knots and defects on one face and caulking edges. Flat sizes shall show edge grain on broad face. Will allow pin and small knots on underside and lower part of caulking edges. Bright sap, whether green or seasoned, on face sided corner not exceeding one-quarter the width or one-third the length."

3. The specifications governing all other grades of Douglas fir are given in the Standard Schedule of Grading Rules issued by the Pacific Lumber Inspection Bureau, 1912.

4. Hardwood items shall be of selected stock, high-grade structural timbers.

5. Knees shall be free from rot, heart or ring shake, large or loose knots, and other defects which would impair their strength for the purposes intended.

6. Treenails shall be of clear all-heart wood, straight-grained, and thoroughly air-dried.

Ship Keels and Other Special Timbers

Outline of An Industry Peculiar to Wooden Ship Construction—Types of Vessels Built in the Maritime Provinces

Written Specially for the Canada Lumberman by Elihu Woodworth

THE business of getting out wooden ship-knees can scarcely be considered an exact science. It does not even require a thorough knowledge of mathematics. Experience teaches, but the selection of suitable trees for making knees appears to be a matter of intuition rather than the result of education. The results obtained by some specialists in ship-knees compared with the returns made by other equally faithful workers leads to the conclusion that the successful knee-producer, like the poet, is born, not made.

To make a wooden ship knee requires, as is generally known, the principal root and part of the trunk of a suitable tree. The root must practically run at right angles with the trunk, and in most cases its size and direction are fairly indicated above ground. Fuller knowledge may generally be obtained by clearing away the moss above the roots, and when this is done the man who is guided by intuition is usually able to decide whether the tree will suit his requirements or not. If he goes on with the work he may not have a single logical reason to give for his decision, but he generally gets what he is after. But finding a tree with an apparently suitable root is by no means a guarantee of success. A root may start out straight from the trunk with good promise of continuing that course, and then make a sudden dip into the earth, and thus prove too short for the purpose required. Or it may happen, after the surface earth has been removed and the roots have been cut off, that the heart of the tree will be found rotten and consequently valueless. And it has sometimes happened that the essential root has been split and spoilt by the tree being blown down before the felling process had been completed. But assuming that the tree is successfully felled, the root the right size and shape and the trunk sound, the next thing is to cut off the trunk at the height required for the knee. In former times the remainder of the trunk was usually left to rot where it fell, but nowadays lumber is too valuable to be wasted in that manner. In former times, too, the knee was hewed into shape with the axe, which was naturally a tedious as well as laborious process. Now the work is generally done in the mill at the shipyard by using a band saw, and is done much more easily and quickly. In some recently opened or re-opened yards, where some labor-saving appliances are still lacking and band saws have not yet been installed, the work of shaping the knees is still done in the primitive manner, but the old way is generally regarded as a waste of time and energy and will undoubtedly be abandoned wherever circumstances will permit.

How Ships Knees are Used

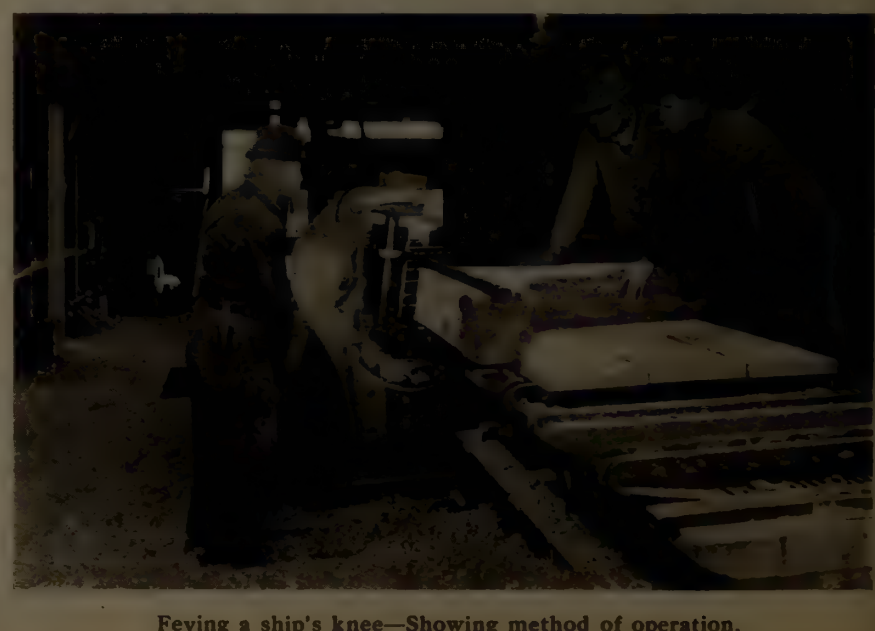
The size of knees depends, of course, upon the position in which they are to be placed. They are supposed to approximate the thickness of the beams or timbers they are designed to support, and, consequently, in vessels of from two hundred to five hundred tons, may range from six to ten inches square. Of course, the knees used to support and strengthen the stem and stem posts are much larger and differ somewhat in shape from the ones in general use. In former times when only wooden knees were used a knee was placed under each end of each deck beam. Now iron knees are used almost exclusively for this purpose, and the part of the knee which goes against the side of the vessel is made longer and curved to fit the vessel's side. Knees are placed horizontally between the deck beams on both sides of each end of each beam, and the sides of the knees that go against the side of the vessel meet between the deck beams. When parts of the deck beams are cut out to make hatches, the timbers which are put for and aft across the ends of the beams to form the sides of the hatches are braced with knees in a similar manner. Two knees of the same size and shape are put back to back under the middle of each deck beam with the lower ends resting on the keelson. The upright parts must, of course, be long enough to reach from beam to keelson, the lower ends must not be over two feet long. Similar knees are used as posts for the deck houses, the perpendicular part being whatever length is required for the height of the house, the other end being just long enough to admit of being conveniently bolted to the deck. Other and generally smaller knees are used wherever there is a possibility of them adding to the strength of the vessel, and the additional strength afforded by well-placed knees is almost beyond belief or comprehension.

Judge Haliburton (Sam Seick) tells of a Yankee who went to Prince Edward Island and advertised that he would give prizes of five, three and two pounds for the three largest ship knees brought him, the knee to be delivered at Charlottetown on a certain date. Every farmer in the Island thought he knew where the three biggest knees were to be found, and on the day appointed hundreds of teams came into Charlottetown, each bringing three enormous knees. The Yankee was on hand and after making a careful selection promptly paid the prizes. The farmers looked at each other. They realized that they had been buncoed, but could not quite understand how it had been done. At last one of them said to the Yankee, "what are we going to do with these we have left?" He told them he had nothing to do with that, that it was their own business, but he finally made them a ridiculously low offer, and, as the knees were of no use to the farmers they accepted it. The shrewd Yankee thus became the owner of a large schooner load of prime knees at a merely nominal price, but it is not likely that such a speculation could be repeated today, for the owners of any kind of ship timber are now pretty well aware of its value.

The quantity of timber required in the construction of a vessel is surprisingly large. If the timber required for a vessel of any specified size were all collected together it would be difficult to convince anyone unfamiliar with shipbuilding that it would all be used in constructing a vessel of the dimensions specified. And when one has seen the huge timbers moulded and fitted together to form a ship, and when that ship has her timbers covered without and within with thick planks strongly bolted, and is braced wherever it will do any good with knees of marvellous strength it is difficult to realize that a time may come when she will be no better fitted to cope with disaster than a vessel of glass. The danger of shipwreck has always attended navigation and must ever be counted among the possibilities, but now a new peril has been added to the perils of the sea and the strongest vessel that can be built may be torn to fragments by a single torpedo.

Sizes and Use of Various Ship Timbers

A few notes regarding the size of the timber used in building a ship may be of interest. Of course, the size of the timbers differ in accordance with the size of the vessel under construction, so it is evident that no fixed rule can be given, but by taking the dimensions of a three-masted schooner recently launched in Nova Scotia a general idea may be formed. The schooner in question is 460 tons register or 500 tons gross, and will carry about 800 tons of cargo. Her keel, which is 142 feet long, is fourteen inches square and is composed of six pieces which are scarfed and bolted together in the strongest manner possible. Beneath this goes the "shoe," which is the same length and width as the keel and ten inches deep. When these are fitted together the keel is laid on a row of blocks firmly fixed so as to sustain the weight of the vessel without settling and with the proper degree of inclination toward the water to make launching practicable. The floor timbers, which may be a foot or more square, are then laid across the keel a few inches apart and in some cases almost or quite touching, and the side timbers are carried up to the height required. The



Feying a ship's knee—Showing method of operation.

stem and stern posts are then put in and secured to the keel, and as they both slope outward the length of the vessel on deck or "over all" may be some twenty feet more than the length of keel. The keelson is then put in and this consists of three timbers of the width and thickness of the keel, placed together vertically and running across the floor timbers parallel with the keel. Galvanized bolts of a suitable size are then driven through keelson, floor timbers, keel and shoe and the frame is ready for ceiling and planking. Ceiling is the first operation, and consists of putting planks in the inside of the timbers from both sides of the keelson up. As the width or "beam" of the vessel under construction is 35½ feet, and the depth of hold 13 feet, an approximate idea of the planks required may be obtained. The planks next to the keelson are nine or ten inches thick and the thickness of the planks is reduced gradually to five or six inches when the top sides are reached. The "clamps" or top planks running the whole length of the vessel, must, however, be nine or ten inches thick, for on them the ends of the deck beams must rest. The garboard strake, or first line of planks on the outside is chamfered into the keel the whole length and bolted through. The planks vary in thickness according to their position and may range from eight or nine inches at the keel to five or six inches at the water line. The bottom planks are of hardwood, birch, beech or maple, birch being generally used—while spruce or hard pine is used on the top sides and rail. The planks have nearly all to be moulded to fit the positions they are designed to occupy, and many of them have to be steamed so that they may be bent to fit the curves of the frame. After the planks are in place any projecting edges or inequalities are dubbed off so as to make the surface as smooth as possible, and then holes are bored through planks, timbers and ceiling. Through these holes treenails, or wooden bolts, are driven, and these are firmly wedged at both ends so that the outside of the vessel is compactly held together. After the deck beams are laid cross knees are placed under their ends and run down the ceiling to which they are bolted. The wooden knees are put in between the ends of the deck beams as before described, the waterways are put down and the deck laid and the vessel is ready for caulking.

This is not intended to be a complete guide to shipbuilding, but merely to give the uninitiated a slight glimpse of the process. It may be mentioned in passing that knees are not the only parts of a ship's frame that depend upon roots. Nearly all the crooked timbers have to be cut with part of the main root left on the trunk in order to give the required curve. Occasionally a crooked trunk may be found that will make a timber of the desired shape without going into the ground, but as a rule every tree that is felled for ship timber has to have part of the biggest root left on. This adds very much to the difficulty of getting out ship timber in winter when the ground is frozen or covered with snow, or both.

Increased Cost of Timber and Labor

A very important consideration in the revival of shipbuilding is the enormous increase in prices. Timber is still plentiful in many places, but the price has at least doubled owing to the advance in wages, which are fully twice as high as they were a few years ago. Skilled workmen, such as ship-smiths, dubbers and caulkers, can scarcely be had at any price, but this trouble will correct itself, for new men are now learning these trades, and the supply will grow to meet the demand. Materials such as iron, oakum, paint, cordage, canvas, anchors and chains have doubled and trebled in price, while in some cases some of the articles mentioned have actually sold for four times the price they commanded a few years ago. And yet in nearly every case where a man has built a vessel for his own use he has been offered sufficient profit on his investment to induce him to sell.

One notable thing about the revival of shipbuilding is the fact that practically all the vessels that have been built in the Maritime Provinces in recent years have been fore and aft or schooner rigged. With the exception of the fishing fleet of two-masters, the great majority of the vessels built have been three-masted or tern schooners, but probably quite a number of four-masters will be turned off next year. In early days every vessel of two masts was square-rigged if measuring fifty tons or more. The first two-masted fore-and-aft vessel ever built is said to have been launched at Gloucester, Mass., in 1714, and was said to be a complete innovation on any rig ever seen up to that date. She is also said to be responsible for the name by which vessels of her rig are distinguished today. It is said that a bystander at her launching exclaimed, as she slid down the ways: "How she schoons," and that her builder immediately remarked: "If she schoons she must be a schooner." This story may or may not be true, but it is evident that it took the new rig a long time to become popular except for vessels of small tonnage, and even in that case they sometimes found the sloop, or one-masted vessel a stubborn competitor. In the middle of last century the British Navy had a large gun-brig squadron consisting of sturdy two-masted vessels with yards across both masts, but, of course, much smaller than ships of the line or even frigates. At the same time, many fine brigs were trading between the provinces and the United States and West Indies. These soon had to give way to a new rig called a brigantine or hermaphoodite—a vessel with its foremast rigged like a full rigged brig and its mainmast like a schooner. This was a very popular rig for many years and was claimed by many shipmasters to be superior to either the brig or schooner as it provided sails adapted for any and every occasion. Of course, the full-rigged ship was always considered THE rig for big vessels, but at one time the bark, with two square-rigged masts and a schooner rig on the mizen, appeared to be more popular for everything but the very largest. Then came the barkentine, a bark of smaller size with only the foremast square-rigged. This style of rig was quite popular for a time and may still be found occasionally. A variant of the brig and schooner, or rather, perhaps, a cross between them, was called a topsail-schooner and was a rig with the lower sails precisely like a two-masted schooner, but with one square sail on the fore-topmast. Sometimes another yard and another sail were added and the vessel then became a "top-gallant schooner." Such rigs were quite common at one time and appeared to give satisfaction, but probably are now extinct. The evolution of the big many-masted schooner began in the latter part of the last century and was confined almost exclusively to the State of Maine. The first four-masted schooner was built at Bath, Me., in 1880, and measured 995 tons gross. Other four-masters soon followed, and in 1882 the first schooner of over a thousand tons was also built at Bath. She had four masts and registered 1,137 tons. The first five-masted schooner was built in 1888 and registered 1,778 tons. No other five-master was built for ten years, but in the meantime many big four-masters were turned off, and among them the Frank A. Palmer, launched in 1897 and registering 2,014 tons. The second five-master, a vessel of 2,440 tons, was launched in 1898. The largest five-master ever built was launched two years later and registered 2,663 tons. In the same year two six-masted schooners were launched from Maine shipyards—the George W. Wells, of 2,970 tons, and the Eleanor A. Percy, of 3,401 tons. These were the largest wooden ships ever built, for the seven-master Thomas W. Lawson, while considerably larger, was built of steel. Counting the wooden ships only, a fleet of twenty-eight schooners, measuring from 1,732 to 3,401 tons, was turned off in twenty years from the Maine shipyards. The dimensions of some of these monster schooners are startling. Here are a few figures from one of them: "Length over all, 395 feet; beam, 50 feet; moulded depth, 34 feet 5 inches; displacement, 10,000 tons; dead weight carrying capacity, 7,500 tons; height mainmast, step to truck, 182 feet; total sail area, 40,617 square feet." And it must not be forgotten that no record is here given of the scores of two, three and four-masted schooners ranging from 100 to 1,700 tons which were built in the same state during the same period.

In the Maritime Provinces at the same time the square-rigger still retained public favor. The schooner was well thought of up to six or seven hundred tons, but vessels above that tonnage were still rigged as barks and ships. Now the tendency is to build nothing but schooners, and larger ones are being built every year. It is not likely that an attempt will be made to rival the mammoth "wind jammers" of our neighbors, but larger schooners will be built in the provinces within a year or two than have ever been built here before.

Encouragement of Shipbui ding in Nova Scotia

The Premier of Nova Scotia introduced a bill into the Legislature recently providing for the encouragement of shipbuilding in the province. The bill provides for a shipbuilding commission of five members and a secretary, to investigate the facilities for shipbuilding in the province and for the manufacture of articles incidental thereto, and to make suggestions for the adoption of rules and regulations to facilitate the development of such industry. The commission is empowered to engage technical assistance and to make arrangements with other similar commissions or departments in Canada, to work together and it may be created a corporate body, under the name of the Nova Scotia Shipbuilding Commission, with all the powers of a corporation. If so formed, it will have power to build purchase and own vessels or acquire shares in same and to operate vessels of all kinds to establish shipbuilding plants, to purchase existing undertakings for shipbuilding purposes, and to promote and finance companies for such purposes. Power will also be given the commission to issue bonds and other securities, and for the purpose of establishing the commission the government will be authorized to raise $2 000 000 by the issue of debentures or consolidated stock of the province, for the expenses of the commission, and for subsidies granted to any company engaged in the building, equipment, or operation of ships.

The Pacific Shipbuilding Co., Ltd., has been incorporated under the Dominion Companies Act with an authorized capital of $50 000 and office at Vancouver. The incorporators include J. C. Shields, lumberman, Vancouver, and J. T. Robinson, broker, Kamloops.

Timber Requirements of Naval Service

Intimate Relation Between Lumber Industry and an Important Branch of Government's War Administration—Quantities and Varieties Required

Written specially for the Canada Lumberman by J. A. Wilson. Director of Naval Stores

IN spite of the many developments of shipbuilding practice during the past century the relations between the lumber industry and the navies of the world, which have existed since the earliest days of navigation, continue to be close and intimate. Apart altogether from the present activity in wooden shipbuilding, occasioned by the shortage of tonnage consequent to the withdrawal of German shipping from the trade routes of the world and the ravages of the U-boat campaign, there are important requirements which are filled by the lumber industry year after year in the normal course of naval work. These requirements are naturally greatly increased by the extraordinary activities in the exercise of sea power and the great extension of naval operations in the war zones in European waters and elsewhere. The increase in the number and variety of craft employed brings with it a corresponding increase in the use of those materials used in the construction and fitting of ships, harbors, and other naval work. Timber of many varieties will always play an important part in naval work.

The Naval Service Requirements

With Canada's magnificent military effort in the war the public is familiar. It has been performed in the full limelight and rightly given the widest publicity. With her many other war activities the public are not so well acquainted. Many of them must, from their nature, be carried out without publicity. Of these the work of the Naval Service is one of the principal. Though not on the same scale as that of the sister service, this work is very important and far-reaching. The personnel is large and the quantity of material of all kinds necessary for its proper performance is great. It covers an immense range of articles; practically no field of industry is not drawn on for supplies of one kind or another. Not the least important are the timber requirements.

A glance at stock lists of His Majesty's Canadian Dockyards will show the variety of timber used, all of which is of interest to Canadian lumber merchants, and some, and these of which the quantities required are largest, to Canadian lumber producers. Commencing with pine, it continues through elm, cedar, greenhart, sabiou, elm, oak, ash, beech, hornbean, maple, birch, sycamore, teak, mahogany, lignum vitae, spruce of all grades of boards and deals, special qualities for oars, silver spruce for aeroplane work, British Columbia fir, poles and masts of all kinds and sizes for different work.

The quantities of the various woods used, of course, vary greatly. Of the rarer hardwoods for special work only the requirements are small, while the consumption of the more commonly used varieties reaches a fairly large figure, as will be seen from the following table:

Department of the Naval Service Expenditure of Lumber, 1916-1917

	Ft. B.M.
Ash	1,300
Birch	2.100
Cedar	10,000
Elm	5,200
Fir	125,000
Lignum vitae (pounds)	600
Mahogany	3,000
Oak	6,000
Pine	60,000
Spruce	600000
Teak	12,000

These figures are consumption from stock, and do not include lumber used in shipbuilding, construction of wharves, buildings, or other work done under contract.

For obvious reasons the features of most importance and interest to the Canadian lumberman and merchant cannot be dealt with fully at this time, as the details of the actual construction of wooden ships for purely naval purposes cannot be given yet. When the full extent of these activities may be published, Canada will have every reason to be gratified at the extent and importance of the contribution of her shipbuilders. A very large proportion of the craft built for work in this country have been wooden ships. Particulars have already been published of the remarkable work of two well-known firms in turning out 550 eighty-foot launches complete and accepted, after trial, in less than as many days. These vessels were all built of Canadian timber, and these first orders have been followed by others for craft of larger size for more important duties.

The export of timber for war purposes is another feature which will be of interest to Canada Lumberman readers. Owing to the closing of the Baltic, shutting off in a great measure the important British lumber trade with the Russian and Swedish ports, the importance of the Canadian market was greatly enhanced, and this country was called on to supply many of those requirements which were usually filled from Northern European sources. Large quantities of spruce and other timber were purchased from Canadian mills, and arrangements were made for their transport to England and France. The Imperial Government supplied the ocean tonnage and the Overseas Transport Service, under the able direction of Mr. A. H. Harris, director of overseas transport, arranged for the loading of the cargoes. In this way several hundred million feet of timber were exported during the year ending March 31, 1917, from Maritime Province and St. Lawrence ports, Newfoundland and the Pacific Coast.

The Naval Service is directly interested in these activities, having control of the vessels while in Canadian waters. This large tonnage was handled without delay or difficulty of any kind. This export trade was undoubtedly of great value to the lumber industry at a critical time in its history. The extension of the work of the forestry units now in France and England, rendering possible the use of home-grown timber, has resulted in a considerable falling off in this trade, which will not probably attain as high a figure again. The shipments this year so far have been confined to limited quantities of woods for special purposes.

Whether in the future the wooden cargo carrier can compete with her steel sister ship remains to be seen. However that may be, the lumber industry will always be called on to contribute a large and valuable quota to the material used by the naval service, and it would be a fatal mistake if the lumberman, under any conditions, looses his interest in the maintenance of that sea power to which the naval service of Canada is lending such assistance as lies within its power.

Situated at vital strategic points, Canada's dockyards at Halifax and Esquimalt will always be centres of naval activity, and, as such, will be important consumers of timber and timber products.

Newfoundland Shipyards Busy

Most of Her Fleet Sold Early During War—Now Being Replaced by Vessels Built in the Colony

Written specially for the Canada Lumberman by J. W. McGrath

IN the early colonial days all of Newfoundland's shipping came from England, but as time passed Newfoundland fishermen began to build their own vessels, both those used in fishing around the coasts and in the Labrador waters, as well as a fleet of larger vessels which prosecuted the seal fishery in winter seasons, after which they were used for the remainder of the year in carrying the products of the country to foreign ports and bringing back provisions and groceries and the many other essentials required in the industrial and commercial life of the colony. Many of these ships were as strong as "Newfoundland oak" and English iron could make, standing firmly against a rigorous clime and the storms and fierce seas which are known only in the North, ofttimes surrounded with fields of Arctic ice. As time brings many changes, so with the passing of years much of this great native fleet of all classes of vessels passed away and shipbuilding gradually died out. Our fishermen, instead of building their fishing vessels as did their fathers of old, preferred to purchase American and Canadian-built vessels. Our marine fleet of ocean-wide carriers became of late years a group of cosmopolitan bottoms, of English, American, Canadian, Norwegian, and Dutch build. But with the advent of the war other great changes in the shipping life of the country came about.

Disappearance of the Old Fleet

A large and splendid fleet of steel steamships, which were owned by our commercial men and used in winter months in connection with the seal fishery and in summer in our foreign trade, were all sold to the Russian Government. The loss was seriously felt in connection with our trade and shipping, and cannot be replaced for some time after the war is over. As a consequence, much more work and far off voyages had to be undertaken by our wooden fleet of sailing vessels,

and with the pressing of great number of these vessels into the foreign-going trade the transportation and shipping facilities of the colony have been strained to the utmost.

Since the outbreak of the war Newfoundland has lost, through the submarine and the storms of the Atlantic, no less than sixty of its foreign-going sailing vessels. This, together with the loss of its steel fleet sold to Russia meant a very serious outlook. Newfoundlanders, however, have gone to work to build their own ships, and that they will succeed there is not the slightest reason to doubt. By the end of the present year from twenty-five to thirty new vessels, averaging from one hundred and fifty to five hundred tons each, built by Newfoundlanders of Newfoundland wood, will have been added to our foreign-going fleet of sailing vessels. Many of these ships will have motor power. By the end of 1918 at least one hundred new sailing vessels will be added to our fleet. There is scarcely a fishing village in the country which is not engaged in one way or another with the building of ships at present, and the sound of the mallet, caulking iron, and saw are heard from early morn to late at night.

Newfoundland Forests Furnishing the Timbers

Business a short time ago was not looking any too bright for the lumbermen of Newfoundland, inasmuch as curtailment in the shipping of lumber abroad was inevitable, owing to lack of shipping; but with ships building in every other district of the colony the lumberman's hands are now full to supply the necessary timber. As a result, also, certain sections of Newfoundland forests which have been considered to be of very little service have suddenly become of great commercial value and centres of much life and activity. The hardwood forests of birch, witch-hazel, and juniper are now coming into their own. Up to the present little of these woods was cut or sawn into timber, as the market was limited. When the building of ships commenced it was found that Newfoundland had an extensive supply of these woods eminently suited for shipbuilding purposes. The style of vessels built so far has been of the tern class, as these have been found most suitable for the fish carrying trade between here and European and South American markets. It is more than probable that, as larger vessels are being built, other styles of ships will be drafted.

It is thought by some who are competent to judge that shipbuilding has come to stay in Newfoundland, and henceforth may be counted as one of its permanent industries. This seems evident from some of the dockyards and extensive plants that are being installed.

The Harbor Grace Shipbuilding Company have bought the premises and plant of one of the largest and most up-to-date whaling plants in the colony, and, with alterations and extensions, are converting it into a large modern electrically-equipped shipyard, where they have laid the keels of four sailing vessels from four to five hundred tons register, but they are also arranging to build iron and steel steamships next season.

The great pulp and paper concern owned by the Northcliffes of England are building three wooden vessels at Botwoodville, their port of shipping. These vessels will soon be ready to launch, when four or five more keels for still larger vessels will be laid.

The pit prop firm of J. O. Williams & Co., Barry, England, with branch offices at St. John's are building three vessels, which will be ready for foreign voyages at the end of the present year. Then they will lay the keels of three or four other vessels. These firms have established large, well-equipped yards, with modern machinery, and there is every reason to think that they will continue in the business.

With one exception, all the work in the planning, building, and construction of these vessels has been done by Newfoundlanders. Not only that, but the making and fitting of the spars, making of sails and rigging, is all native work, and, without a doubt, every new ship sailing away from the shores of Newfoundland will be captained and crewed by Newfoundlanders.

The shipbuilding plant at Harbor Grace is owned by a Norwegian firm, whose headquarters are at New York, and who are the owners of a line of steamships sailing between America and Norway, and otherwise largely interested in shipping circles.

Roughly estimated, the value of ships which will have been built in the shipyards of this country by the end of 1918 will be between eight and ten million dollars.

Timber Consumption

From the standpoint of timber construction it may be said that the construction of the various shops, slips, etc., entailed the consumption of nearly three million feet. In addition to this, each of the boats will take probably seventy thousand feet of timber for the interior construction.

Particular attention is also drawn to the large poles which are used for the overhead trolleys, each of the poles supporting the head of these cables being 120 feet high. The masts of the vessels will also require to be 100 feet long or over.

It will be seen, therefore, that the lumber industry in British Columbia has benefited to no small degree through the construction of these vessels.

Wooden Ships Have Great Vitality

With the revival of the industry of wooden shipbuilding, the following historical facts are of special interest. They are gleaned from an article dealing with the life of wooden ships, which appeared in a London publication in October, 1902:

As a general rule the lifetime of a ship built of the very best material scarcely exceeds 120 years. To be sure there are exceptions. Perhaps the most remarkable of these is the case of the whaler "True Love," of Hull. The "True Love" was a bark of 248 tons, and was built in Philadelphia in 1748. After she had sailed for a few years under the American flag she was purchased by an Englishman and converted into a whaler. When she was ninety-seven years old—old enough to be retired—she still voyaged to the Arctic Ocean. After changing hands once again she was still in active commission for forty-four years as a carrier of wood in the Baltic Sea. Finally, after an active life of 139 years she succumbed to the inevitable axe.

Still another hoary ship was the sailing vessel "Betsy Caine." The exact date of her launching is not known, but it is definitely recorded that in 1688 she bore the name of "Princess Marie," and had the honor of carrying Prince William of Orange to England. She was then used for a time as a pleasure yacht by Queen Anne. After her period of royal usefulness had passed she was sold and re-christened "Betsy Caine." Her end was pathetic. She was shipwrecked at Tynemouth in 1827, after she had carried the English flag uninterruptedly for 139 years.

A long life was also granted to the three-masted schooner "Three Sisters," a contemporary of the "Betsy Caine." She had taken part in 1689 of the siege of Londonderry. At the beginning of the last century, after she had attained the respectable age of 130, she was still voyaging in the Irish Sea.

In an account of old ships, the brig "Brotherly Love," which carried Captain Cook on many a notable voyage, should not be omitted. After a service of 140 years she sank in a collision in the harbor of Hamburg.

An Old Danish Ship

In November, 1892, the Danish ship "De Tree Sostrene" cast anchor in the harbor of Dundee. Some curious person hit upon the idea of looking up the history of the vessel. The investigation proved that the Danish ship was built in 1772 in Rudkjobing and was at that time 120 years of age.

The "Success," which voyaged from one English port and another, was launched in 1789. As late as 1895 she made a voyage to Australia, and later crossed the Atlantic Ocean.

An investigation carried out some time ago by the shipping register officials of Great Britain showed that on their books were recorded twenty-four English ships over 100 years old, and thirteen over ninety-five years old. A ship twenty-six years old was reckoned "middle age."

It is, of course, difficult to ascertain what is the maximum term of service of a steamship under the most favorable conditions. It is remarkable that of the steamers built from 1815 to 1830 not a single one seems to be in existence. This is perhaps due not so much to lack of endurance in the steamship as to the fact that the cost of running a modern vessel is less than that of an old-timer. The oldest vessel of the English merchant fleet is the side-wheeler "Sir Charles Ogles," of Halifax, built in Dartmouth in 1830. The oldest English iron ship is the Cardiff ship "Swift," which is now (1902) seventy-one years old, and is still in active service.

The article also notes the fact that recent investigations showed beyond doubt that the oldest warship extant is the "Victory." The "Victory" was launched in 1765. She is still doing service as a training ship at Portsmouth.

time owned mills at Montford and other points, but lately manu- the railway, of which T. DesBrisay is the resident superintendent.

Lloyd's and Pacific Coast Auxiliary Schooners

In view of the fact that the auxiliary motor vessels now building on the Pacific Coast are of a new type, it is desirable that underwriters should understand that the construction is somewhat experimental at present, says "Fairplay," London. Several of the vessels now in commission have proved difficult to handle in narrow waterways, and an effort is being made to insert a clause in policies to the following effect:

"Warranted to be towed in and out of Grays Harbor, Williams Harbor, Coos and Humboldt Bays, and to tow out of Columbia River."

As the value of the timber cargoes carried by these vessels runs into a considerable figure, underwriters on cargo would be well advised to stipulate for a similar clause if vessels load their timber at any of the above-named places.

How Modern Wooden Ships Are Constructed

Details of Methods in Use for Laying Out Yards—Selection of Timbers, Building and Erecting Frames—Equipment and Material Required

THE construction of a wooden vessel is rather a mysterious matter to most people, but the materials used, methods adopted and equipment involved have become sufficiently standardized to permit of being definitely described in a practical manner. For what is contained in the following article, including illustrations and information, we are indebted to a series of articles in the Marine Review, of Cleveland, Ohio, by H. Cole, Estep.

Before considering the design and construction of ships in detail, it is advisable briefly to consider the methods of shaping and fashioning timbers for ship construction and also the principal methods of fastening the various elements together.

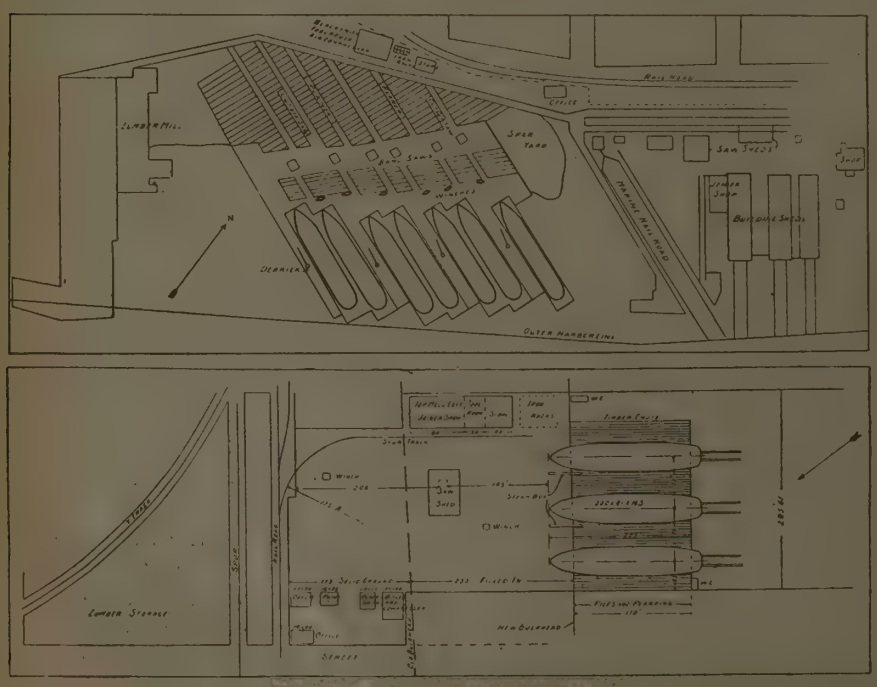
Generally speaking, timbers are shaped by sawing, chopping, planing and boring. As far as possible, in modern wooden shipyards, machines are supplanting hand labor for all of these operations. Band saws or jig saws, together with common circular saws are used for a great variety of operations. Air-driven boring augers are used and special machines have been developed for beveling timbers and performing other operations peculiar to shipbuilding. In many cases, however, hand tools must be used, as for instance in dubbing-off the inside of the hull preparatory to laying the ceiling. For many operations such as this, the adz is indispensable. For rough hewing, axes are employed, while hand planes, bits, chisels, and all the tools found in the carpenter's kit also are utilized.

For fastenings, dowels, treenails, drift bolts, spikes and screw bolts are employed. The various pieces may also be scarfed, that is, beveled together, so as to add to the strength of the joint.

Treenails are usually 1¼ inches in diameter and from 26 to 30 inches long. They are made of hard wood, usually locust, and are used chiefly for fastening the planking and ceiling to the frames. For this purpose a hole the scant diameter of the treenail is bored in the [illegible] to be fastened and the treenail is driven home with an air hammer. After it is in place, it is cut off, split on the end, and wedged to a tight fit. The subsequent action of the water is supposed to swell the treenail and make it fit tighter.

Although treenails are used extensively in modern shipbuilding, there is doubt as to their efficiency after the ship has had an opportunity to work in a seaway. Undoubtedly, however, they were employed in the construction of the ark, for want of knowledge of more modern fastenings, and this is a sufficient recommendation for their continued use, in the eyes of many old-line shipbuilders. The chief virtue of treenails seems to lie in the fact that they work with the ship, and therefore do not present as unyielding a resistance as a steel fastening.

To supplement treenails, however, in fastening the main members of wooden ships together, steel or iron drift-bolts are used. Usually they are about 1 inch in diameter. They are generally driven by air hammers in holes bored 1/16 inch smaller in diameter than the bolt. Although the difference between the size of the hole and that of the bolt is small, they hold tenaciously, especially when the ship is new. It is said that drift-bolts driven 3 feet into a fir timber hold so fast that they break in tension before they pull out. Wherever possible such bolts are driven through and clenched on steel rings in the inside.



Two plans of shipyard layouts.

For "Sticking" the planking to the frames and other preliminary fastenings, as well as for securing the deck planks, galvanized standard ship spikes are used. Usually they are ½ inch square and 8 or 10 inches long. Screw bolts also are used for some forms of fastenings, as well as bolts fitted with washers and nuts. The latter may be taken up from time to time as required.

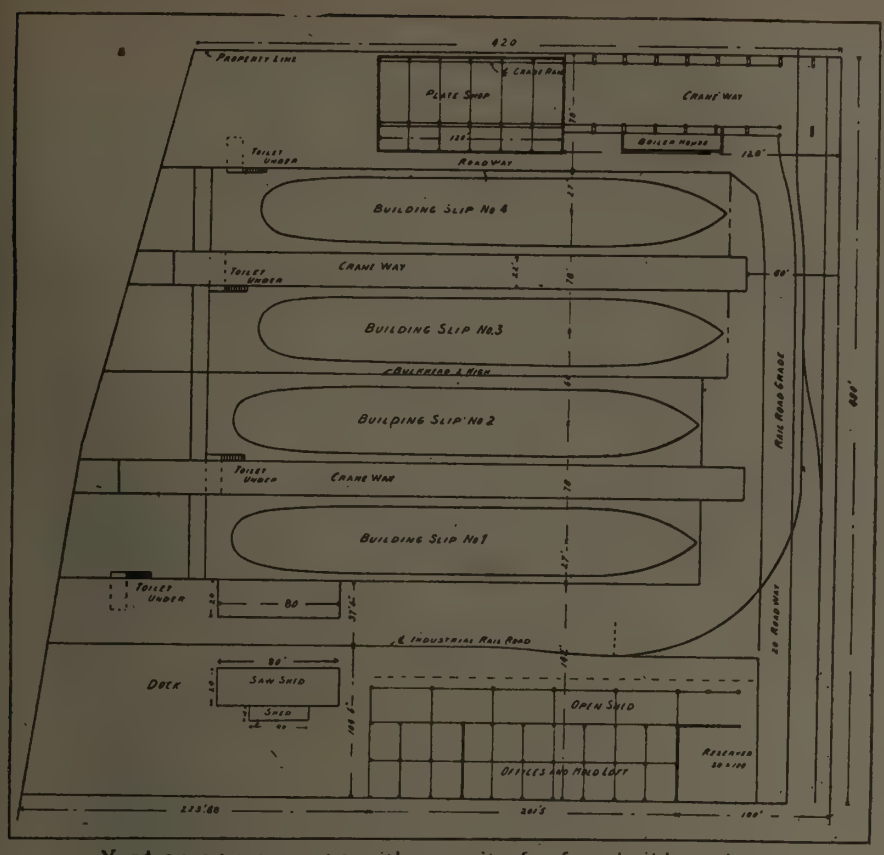
In modern wooden vessels built on the coasts of the United States, considerable use is made of edge-bolting to fasten the various keel and keelson elements and the strakes of ceiling together. Edge bolting means fastening the pieces together longitudinally. In other words, the ceiling strakes are bolted through and through to each other, as well as being bolted to the frame timbers. There is no doubt that this form of fastening adds greatly to the strength of the hull structure, particularly in a longitudinal direction, offering resistance to hogging strains. In fact, some experts go so far as to say that the edge-bolting is all that prevents the largest of wooden ships from breaking-up in a seaway. This is probably an exaggeration, although it has been demonstrated that timbers well edge-bolted at least approximate the strength of single pieces of the size of the members so combined.

Plan and Equipment of the Shipyard

Before the actual work of building the ship can commence, the shipyard must be planned and equipped. If the builder is going into the construction of wooden ships on a permanent basis, this problem is perhaps the most important one he will be called upon to solve. Mistakes in the design or method of building a given hull can be rectified when the next ship is laid down, but blunders in the layout of equipment of the shipyard can seldom be corrected, except at prohibitive expense. The shipbuilder who starts out with a half-baked, poorly laid out, pinched and skimped plant, is saddling himself with a handicap that may later spell ruin. The impression is all too prevalent that a well planned, thoroughly equipped plant, carefully arranged and organized, is relatively necessary for building wooden ships. Quite the reverse is true, and a study of the plants that have built ships continuously for a generation or more, through good times and bad, reveals the fact that they are all as completely equipped for their task as any steel shipyard. In fact, one of the unfortunate results of the present boom is the multiplication of haywire yards on both eastern and western coasts. If wood shipbuilding is to establish itself permanently, the idea that anybody's back lot will do for a building site, and a chest of carpenter's tools for equipment, must be definitely abandoned.

The location of the yard is the first phase of the problem to be considered. Four factors govern the selection of the site: The supply of labor, the cost of the land, the contour of the ground and the depth of the water. Labor supply and real estate prices are complementary; where labor is abundant, property is expensive, and where land is cheap the supply of labor is dubious. The builder must compromise these conflicting elements to the best of his judgment and ability, remembering that a busy yard may carry a high overhead, but no plant can run without men. It is significant that the most successful of the modern wooden shipbuilding plants on the Pacific Coast are located in or near large cities. This would indicate that labor supply is the controlling factor.

In selecting a site for wooden shipbuilding, the slope and contour of the ground are important. Preferably, the ships should be built on dry land that has just sufficient natural slope to permit the laying of the keel blocks conveniently. There also must be level property for the construction of buildings and the storage of lumber. These conditions are not always easily fulfilled, although they are found in many of the oldest and most successful yards. In some cases, where long tide flats are encountered, filling has been resorted to, and although it is an expensive process an ideal site can be created in this manner. An example of the relative importance of properly preparing the site is found in the estimates for a small California yard, in which the cost of buildings is given as $9,280 and the yard work



Yard on city property with capacity for four building slips.

at $16,520, including $4,720 for filling. In some Pacific Coast yards where natural ground conditions are unfavorable, the building ways, framing stages and even the foundations for buildings and lumber storage have been placed on piles. On fresh-water rivers, safe from the ravages of the toredo, this procedure is not so objectionable as on salt water, but under all circumstances it is subject to criticism on account of being temporary and a source of continual expense for renewals. This practice can be defended only in cases where the builder feels his business is so purely transient that the expense of filling-in permanent foundation or paying enough for a suitable natural site, is unjustified.

In many wooden shipyards too little consideration has been given the influence of the shape of the property on the progress of the material through the plant. Many yards, especially some of the newer ones, are laid out with no thought whatever, apparently, to the labor that might be saved by properly and thoughtfully routing the work. The principles of straight-line progress that are so ingrained in the metal working industries and most other productive establishments, have been completely overlooked. The result is chaos and a tremendous waste of money. This comes from the practice of throwing the yards together rather than having them designed by a competent, experienced engineer.

If routing alone is to be considered, a long, narrow yard, in which the raw material comes in at one end and proceeds in a straight line to the building ways at the other, is ideal. This arrangement can seldom be realized, and the next choice is a rectangular yard in which the material flows around only one corner and does not double back at any point. Regardless of the shape of the plot, however, and the limitations of property lines, a skilled designer can so arrange the equipment as to get the most out of the situation at hand and avoid waste in handling materials.

The accompanying illustrations show some of the principles of yard arrangement. One shows a small yard for three ships. In this case, a long, narrow piece of ground was available and a straight line plant was the result. Another illustration shows what can be done with a comparatively shallow, irregular plot on which a large number of building slips must be placed. In this case, extra room and proper routing is obtained by placing the slips at an acute angle with the harbor line. The advantages of angular layouts of this general character have long been understood by industrial engineers.

Getting the Most Out of City Property

A third illustration shows what can be done on comparatively restricted ground area in the heart of a city. In this case, four building slips for ships of the largest size are provided, together with ample room for shops of a more elaborate character than are usually found around wooden shipbuilding plants, yet the plant is not overcrowded. The lumber moves across the yard from south to north and is properly distributed by means of the travelling cranes between the first and second and third and fourth slips. The steel fittings, which are made up in the plant shop, move in the opposite direction.

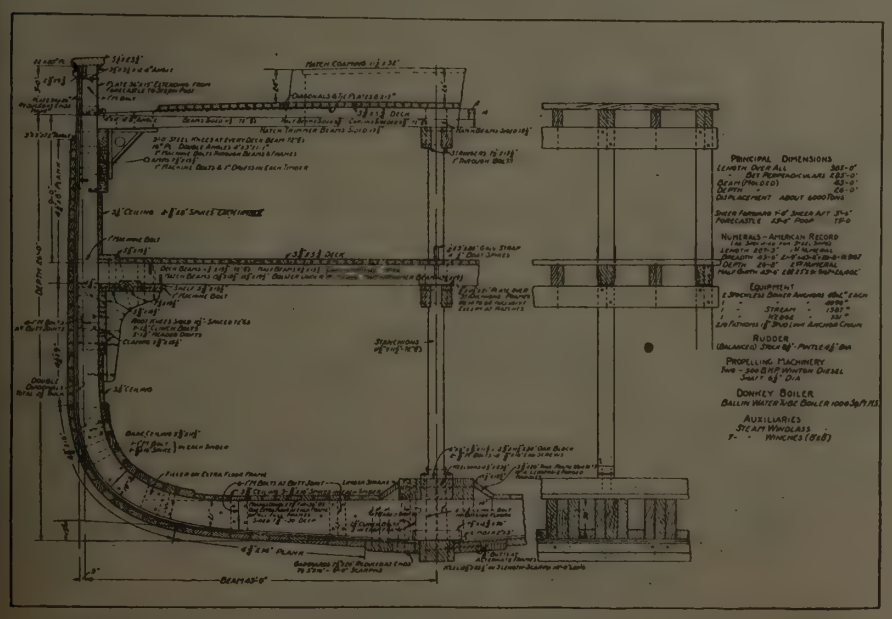
The cost of wooden shipyards varies, of course, within wide limits, depending on the locality, price of the ground, number of building slips and the completeness of the shop and yard equipment. In altogether too many cases the latter item is dangerously slighted. Probably $45,000 represents the minimum for three slips, and in this case the margin is hardly comfortable. From this figure, the investment ranges up to $500,000. While no definite suggestions can be given where so many variables are to be considered, it is safe to say that a reasonable sum invested in the plant and its equipment makes for permanent success.

The question of protecting the building slips with sheds is a moot one. There is no doubt the protection of the work from the weather during construction tends to add to the life of the vessel, and that from the standpoint of the comfort of the workmen and their efficiency, especially in the winter time, sheds are desirable. On the other hand, they add greatly to the cost of the yard, and this is the principal reason why so much work is being done out-of-doors.

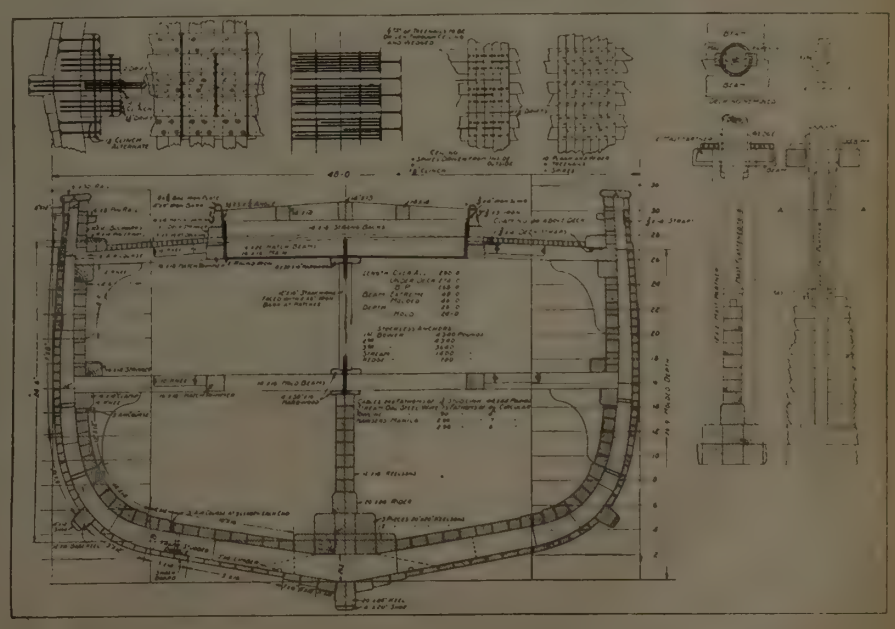
The equipment necessary for economically handling materials, with the tools required for working up timbers, constitute the bulk of the machinery in a wooden shipyard. In many wooden shipyards, as previously suggested, the problem of handling lumber and other materials has been given scant consideration. Too often the traditions of the logging camp and the old-line sawmill have been handed on to the shipyard without any thought of the difference in the problems to be solved.

In the smaller yards, however, where the overhead soon becomes topheavy, simplicity of equipment is permissible. In such cases, a small hoisting engine or two and a few hundred feet of wire rope are about all that are required for handling timbers, supplemented by a few dollies or lumber trucks. The timbers are handled by skidding them from place to place in the conventional lumberman's fashion.

In elaborately equipped yards, and in most cases where thoroughly satisfactory results are desired, some form of crane equipment



Midship section and construction details of 4,000-ton motor ship with diagonal planking.



Midship section and construction details of 290-ft. auxiliary schooner.

is provided. In cases where there are building sheds, rope or electrically driven I-beam monorail hoists running the full length of the shed have been found to fill the bill. Where the work is out in the open, traveling cranes are most frequently employed.

The equipment required for working-up timbers, including the band saws, cut-off saws, jig saws, planing machines, automatic leveling machines, etc., must be carefully arranged so the work can be gotten out expeditiously with a minimum of re-handling. There are two general methods of arranging this equipment. In some yards it is grouped together in a mill located, usually, at a convenient point in front of the building ways. In other yards, the apparatus is scattered among a number of small saw sheds, on the unit principle. In the latter case, each building slip is provided with an individual saw outfit, located, generally, at the head of the ways.

For handling light timbers in single pieces, ordinary lumber dollies and wide-tired four-wheel trucks are used in great profusion in wooden shipyards. These vehicles usually are of the simplest character, consisting of nothing more than a timber frame to which the wheels and axles are bolted. They may be moved by man power, although horses are usually employed. In some of the more progressive yards, small gasoline-driven tractors have been introduced, making it possible to handle the lumber trucks in trains.

Some Standard Designs for Wooden Ship Construction

The problem of overcoming the inherent weakness of wooden ship construction has been the object of close study by a large number of naval architects for a couple of years—ever since the revival in wooden shipbuilding set in earnest. As a result of this intensive effort, a number of somewhat modified designs have been evolved, covering the construction of wooden vessels for deep sea service. The latest designs provide for boats up to 308 feet in length and of 4,000 tons capacity. In some of them steel is employed extensively.

The question of using steel reinforcing in some form to counteract some of the characteristic weaknesses of wooden hulls is a moot one. Some builders, particularly of the older generation, claim it is not practicable to fasten wood and steel members together in a satisfactory manner. It is interesting to observe, however, that practically all of the larger vessels under construction on the Pacific coast at the present time are reinforced with steel in one form or another. If current practice is any guide, it may safely be stated that steel reinforcement is necessary for hulls over 275 feet in length and exceeding, say, 3,500 tons dead weight.

Various types of steel reinforcing are employed. In some cases, this consists simply of deck straps, with steel lined hatch combings. The deck straps usually are nothing more than flats ¾ inch thick and 4 inches wide riveted together at the ends.

The design worked out by Theodore E. Ferris for the standard wooden vessels for the United States Emergency Fleet Corp, provides for a system of diagonal steel strapping. The straps in the United States government boats are ½ x 4 inches in cross section and, of course, extend around and under the turn of the bilge. They are riveted at the top to ¾ to 8 inch steel chord. The straps are arranged in the form of a diagonal lattice and are riveted together where they cross. They are lined up to meet the top chord at every other frame space and are fastened to the frame timbers by 8-inch bolts. It is said this form of strapping for a 281-foot government boat costs $8,000, including $5,000 for labor. Two other forms of steel strapping are in general use on the Pacific Coast at the present time. One style, designed by Mr. R. Ward, general manager, Grays Harbor Ship Building Company, Aberdeen, Wash., consists of two arches of ¾ x 14 inch universal plates let into the sides of the frames and securely bolted in place. The other type, designed by Fred A. Ballin, Supple & Ballin, Portland, Ore., involves the construction of a steel bulwark or topside over the upper ends of the frame timbers. The steel topside construction is riveted to a deck stringer plate of suitable dimensions.

Modern designers, however, do not depend entirely on steel reinforcing for strengthening naturally weak wooden hulls. In the newer types of ships, the general arrangement of the hull structure has been materially modified and the distribution of timbers radically altered. The details of three types of modern Pacific Coast construction are shown in the accompanying cross-sections.

One of the illustrations shows the midship section of the standard 5-masted auxiliary schooner. A number of these vessels have been built. They are of the following dimensions: Length over all, 290 feet; length under deck, 274 feet; length between perpendiculars, 268 feet; beam, extreme, 48 feet; beam molded, 46 feet 10 inches; depth, molded, 26 feet 9 inches; depth of hold, 24 ft. 6 ins. They are equipped with twin screws driven by 400 horsepower, 4-cylinder, crosshead type, 2-cycle oil engines. A study of their cross section indicates that in their general design these vessels are similar to the standard Pacific Coast type, except that they are strengthened by means of a heavy center girder keelson and by steel arch strapping on the sides.

The keelson construction is one of the features of these vessels. The main keelson structure consists of five 20 x 20-inch pieces laid on the floors, surmounted by three 20 x 20-inch sister keelsons and a 20 x 24-inch rider. In addition, and this is where the construction differs from ordinary practice, there are eight 12 x 18-inch keelsons laid on top of the rider keelson. These latter keelsons form a sort of center girder. They are arranged in the shape of an arch, extending up to the height of the hold beams amidship and tapering down on both ends.

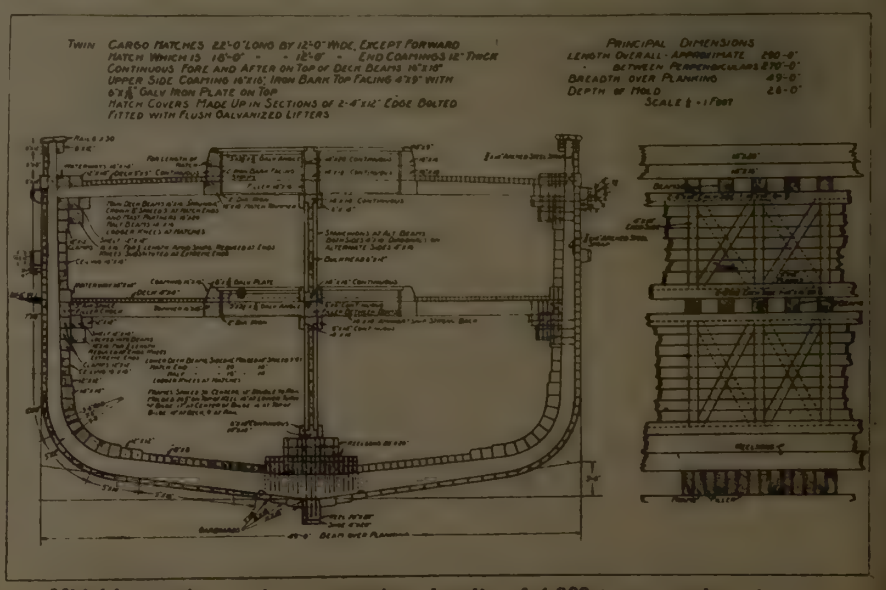
The cross section details of a 4,000-ton wooden steamer form an interesting contrast to the motor ship. This vessel is 290 feet in length over all, 270 feet between perpendiculars, 49 feet beam over the planking, with a depth of hold of 26 feet. The keelson construction in this case consists of five 20 x 20-inch keelsons laid on the floors surmounted by three 20 x 20-inch sister keelsons and a 14 x 14-inch continuous rider. On either side of the rider are 6 x 14-inch stringers. Instead of the center girder-keelson a central longitudinal bulkhead is employed. It consists of stanchions at alternate beams connected by a bulkhead built up of 6 x 12-inch timbers. These timbers are further strengthened by 4 x 10-inch diagonals on both sides.

The use of knees for holding the beams in place has been obviated by the employment of a clamp and shelf type of construction. The clamp consists of three 12 x 12-inch pieces surmounted by the shelf which is built up of a 12 x 14-inch, 12 x 12-inch and 16 x 16-inch stringers. This shelf construction is used for supporting both the lower and upper deck beams.

The other cross section gives details of a 4,000-ton motor ship designed by Fred A. Ballin, Supple & Ballin, Portland, Ore. The construction adopted presents several novel features, the object being to produce a boat which will have strength equivalent to that of a steel hull without using excessive amounts of timber. To accomplish this purpose, unusually deep floors are employed, together with a double diagonal inner skin of planking and specially designed steel topsides. The boat, which has a displacement of about 6,000 tons, and a capacity of about 4,000 tons, is 308 feet in length over all and 285 feet between perpendiculars. The molded beam is 43 feet and the molded depth 26 feet. The sheer forward is 7 feet; aft, 3 feet 6 inches. This vessel is driven by two 500-horsepower, 6-cylinder Winton engines, built by the Winton Gas Engine Works, Cleveland. These engines are connected to twin screws.

Weights of Materials Used

It is necessary when building a wooden ship to work out the weights of the various items in the structure carefully. The following table will give an idea of what these figures come to in the case of an actual ship. The figures given below are the hull weights of a motor schooner built by the Aberdeen Shipbuilding Company, Aberdeen, Wash., for the French-American Shipping Company, New York. These boats are 252 feet in length over all and 221 feet between perpendiculars. The length of the keel is 220 feet. The extreme beam is



Midship section and construction details of 4,000 tons wooden steamer.

Scaffolding arranged alongside keel blocks.

Resawing frame joint to a proper fit.

43 feet, the molded beam 40 feet 2 inches, and the depth of hold is 21 feet. The hull weights are as follows:

Item	Pounds
Oakum	8,000
Auxiliaries	8,000
Anchors and chains	38,350
Boats	2,000
Cabin and forecastle fittings	10,000
Davits	2,000
Deck piping and pumps	3,000
Donkey boiler	8,000
Engine room piping, air bottles, lead sleeve	4,000
Exhaust piping	2,200
Fastenings	266,000
Fresh water	58,156
Lumber	3,166,350
Main engines	56,000
Oil	270,000
Propellers	4,000
Rigging	20,000
Spars	49,200
Shafting	10,000
Steering gear	1,000
Strut	4,000
Tanks	26,000
Windlass	16,000
Winches, 3	30,000
Spikes	40,000
Clinch rings	2,500
Iron bark	30,000
Paint	70,000
Total	4,206,756

An interesting formula for estimating the carrying capacity of wooden ships of the standard Pacific Coast type with heavy center keelsons has been worked out by western engineers. This formula is as follows:—

C equals 1.15 L. W.

Where C. is the carrying capacity in pounds L is the number of board feet of lumber required to build ship.

W is the weight of the timber per board foot.

If actual experience is any guide, it requires from seven to nine months to build a wooden vessel on the Pacific Coast under existing conditions. Claims have been made that 3,500-ton boats could be built in four months, but in no case under the writer's observation has this been substantiated, even approximately. It is the writer's judgment that with the proper yard organization and care in assembling materials promptly, these boats might be constructed in five or six months at the minimum.

While it is possible to crowd the construction by adding more men to the job, the point is soon reached where additional men do not result in proportionately increased progress. One of the oldest practical ship builders on the Pacific Coast claims that it is not economical to work over 50 to 60 men on one hull. About 25 per cent. of these men should be skilled.

Information on Construction of Frames and Keel Laying

Laying the keel is popularly supposed to be the first step in the construction of any vessel, be it wood or steel. As a matter of fact, it is not the first operation to be performed. Before the keel can be laid, the ways must be prepared and the keel blocks assembled in their proper position. The first step, therefore, in actually building a wooden ship, consists in preparing the ways or foundation for the keel blocks. In European shipyards, the building slips or ways frequently are paved with stone in order to insure a permanently smooth, true surface. In such cases large blocks of wood are let into the masonry and the keel blocks, shores, etc., where necessary, are bolted or spiked to these blocks.

In American yards it is not considered necessary to pave the building slips. In fact, in most wooden shipyards, the amount of work involved in preparing the ways is comparatively slight. If solid ground is available on which the blocks may be laid, it is simply necessary to grade the site to a comparatively true surface. It is, of course, better in such cases if the ground slopes properly. If the ground has no slope it is necessary to build the blocks up rather high under the forward end of the vessel in order to give the proper declivity to the launching ways.

If the ground is sufficiently solid, the keel blocks can be laid directly on the earth, which in some cases may be tamped a trifle. If the ground is soft or if it has been recently filled, piles must be driven to support the weight of the ship under construction. In some cases, particularly on the Pacific Coast, as previously mentioned, the entire building slip rests on piles which may be driven out over the water to a considerable distance. In cases where this is done in salt water, more or less frequent repairs will have to be made to the foundation. It is better, therefore, where possible, to lay the keel blocks on dry land.

Arrangement of Keel Blocks

The keel block structure consists of blocks about 16 inches square and 6 to 8 feet in length, piled between 2 x 12-inch planks which run parallel to the keel. From two to three planks are placed between each layer of blocks. The planks give the structure what little longitudinal stability it needs.

The blocks are laid to the proper declivity by stretching a cord between fixed points, the correct height of which have been determined either by direct measurement or means of a civil engineer's level. Most authorities state that the keel blocks should be laid to a declivity of ⅝ inch per foot. On the Pacific Coast, in most cases it has been found this is not enough to get the vessel properly started down the ways. In one case it took 20 men half a day to get the ship started after the launching should have taken place. Most western ship builders today are laying their blocks to a grade of ¾ inch or 1 inch per foot.

It should be remembered that when the ship is launched her after part is raised by the bouyancy of the water and if proper care is not taken in arranging the declivity of the keel blocks, the forefoot may touch the ground when the ship has reached the end of the ways. In some cases, to prevent this it has been found necessary to excavate or dredge the lower end of the slip after the vessel is finished.

In preparing the building slip, therefore, there are three important considerations to be kept in mind. They are as follows:

1.—To provide sufficient space between the ship and the ground

for performing all the building operations at the keel and bilges.

2.—To leave sufficient space between the ground and bilges, and one-sixth the breadth of the ship at each side of the keel for fitting the ground ways, and for driving in the wedges which tighten the cradle under the ship, so as to support her after the shores and blocks are knocked away.

3.—To make such an allowance for the excess, if any, in the declivity of the launching ways, over that of the blocks as will prevent the forefoot of the ship from touching the ground when she has reached the end of the ways, as previously explained.

In order to obtain the required height of the foremost block with great accuracy a sketch of the ground or slip upon which the ship is to be built should be made in elevation and section, and two pieces of cardboard should be cut, one to the shape of the transverse and the other to the longitudinal section of the ship, both drawings and cardboards being on the same scale. By placing the cards on the sketches and trying them in various positions, all risk of error in deciding the height of the foremast blocks can be avoided.

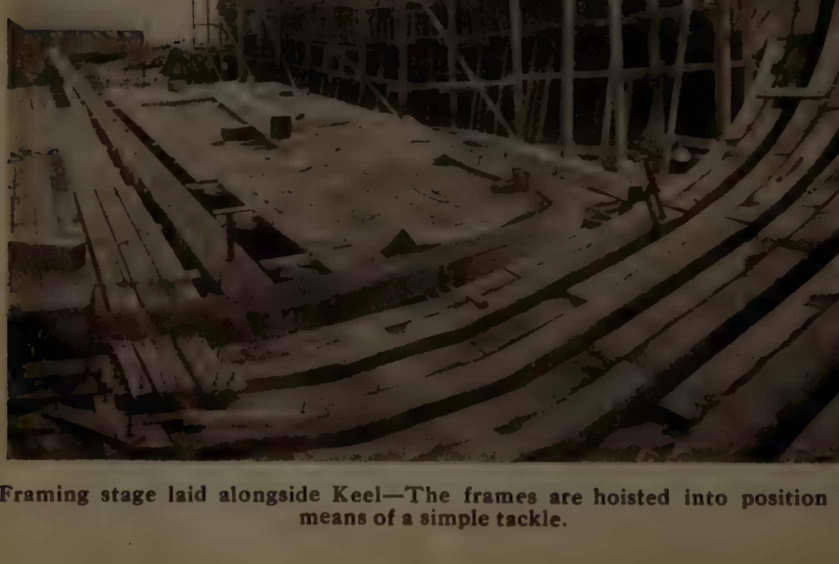
The launching ways usually are set at a greater declivity than the keel blocks and the amount that the forefoot of the ship falls below the line of the blocks when it reaches the lowest part of the slip can be found by a simple mathematical calculation. Clearance between the forefoot and the ground should not be less than 9 to 12 inches. Now in the case of a ship built on a slip 300 feet long, on blocks at an inclination of ⅝ inch to a foot, and launched at ¾ inch to a foot, it is evident that the bow falls ⅛ inch below the line of the blocks for every foot the ship slides down the ways. Hence, in the 300 feet, there is a total relative fall of 37½ inches, and therefore, the foremost block, if at the head of the slip, must be kept 37½ inches plus 12 inches, or 49½ inches above a line, which at an inclination of ⅝ inch to the foot just touches the after end of the ship.

From these data the foremost block can be readily built to its correct height. In order to lay the other blocks, instead of using the string or cord previously mentioned, a declivity batten may be prepared. This is a batten about 20 feet long, the edges of which are straight and inclined to each other at an angle equal to the required declivity of the blocks. Now put up a block at 20 feet abaft the foremost one to such a height as will cause the upper edge of the batten to be level, while the lower edge rests upon the two blocks. These two blocks will now have the proper declivity with reference to each other.

The other blocks are laid in a similar manner, or by sighting them with the two first placed, and when this is done they can be proved by stretching the line along their upper surfaces or by trying the declivity batten along the whole range of blocks.

After the blocks are laid out, in some yards they are secured to the ground by nails, dogs, etc., and if necessary, to each other. Spur shores also are recommended, reaching from the foreside of each block near the ground to the upper part of the after side of the one in front of it, in order to prevent the blocks from tripping, a casualty which has at times occurred when such precautions have not been taken.

The keel rests on short blocks about 10 inches thick which are supported on wedges. These wedges serve a double purpose. They make it easy to bring the blocks exactly up to the line so that each pier supports its proper proportion of the weight and in addition, when the ship is to be launched they may be readily knocked out of position with a sledge. After the site is prepared, the work of arranging the keel blocks and the preparations for laying the keel should take less than a week. The actual laying of the keel for à 300-foot boat can be accomplished in a day or two. In some yards, the blocks are piled up crib fashion.



Framing stage laid alongside Keel—The frames are hoisted into position by means of a simple tackle.

Upper part of Arch Strappi

Getting Out the Keel

The keel is made of long pieces of selected timber. On the Pacific Coast these pieces can easily be obtained in lengths up to 100 feet. These extra long lengths, of course, reduce the number of joints or scarfs. In order to preserve their continuity as much as possible, the various sections of the keel are scarfed together. These scarfs may be from 10 to 20 feet in length. The two pieces, of course, are thoroughly bolted together at the scarf. The joints of the scarf frequently are laid in carbolineum to prevent decay and also to resist the action of the sea animalculae. As soon as the keel is laid, its alignment is secured against disturbance by means of sway braces spaced every 30 or 40 feet.

After the keel pieces are laid on the blocks and fitted together, the whole is sighted and proved to be straight. When this is accomplished, the keel is secured in the correct position by driving short treenails to the blocks close against the side of the keel. All of the bolts are now driven through the keel scarfs. The positions of the frame stations are next transferred to the keel, after which it is ready to receive the frames and to be joined to the stem and stern posts.

In order to prevent any water which may find its way into the joints of the keel scarfs from getting behind the garboards, a stopwater may be placed in the joint of the scarf. This stopwater consists simply of a plug of soft pine driven tightly into a hole bored right through the joint. The expansion of the plug, when immersed, prevents water from going up through the scarf and getting behind the bottom planking.

The framing is one of the most important parts of the ship's structure, which consists, essentially of nothing more than a series of transverse ribs covered with a longitudinal series of planks which bind the frames together and keep out the water. The frames usually are spaced at equidistant intervals, the length of which is known as a "room and space." The length of the room and space is fixed by the designer. On account of the great curvature of the transverse sections of the vessel, especially amidships, it is necessary to build the frames of a number of pieces and in order that these may be united as rigidly as possible, they are disposed in two sets, the butts of which give shift to each other, the whole being so combined that its elements will yield mutual supports in the most efficient manner obtainable.

Preparing the Molds

The proper curves or molds for the frame sections are provided by the mold loft, where the sheer-draft or lines of the vessel are laid down full size. The mold loft should be big enough so the longitudinal or sheer-plan of the vessel can be laid down in at least two sections. In many cases, however, it is necessary to lay down the ship in three sections.

A sheer-draft, as the lines of the vessel frequently are called, usually is prepared in the drawing room to a scale of ¼ inch to the foot. When this is copied to full size on the mold-loft floor, it may be found that errors, almost inappreciable in the quarter scale drawings are very apparent when magnified 48 times,. It is usually found, therefore, that the three sets of lines, namely, the sheer-plan, body-plan, and half-breadth plan, disagree sufficiently to prevent the various problems of laying off from being solved with that degree of accuracy which is necessary in order to obtain a fair surface to the vessel. Hence a fairing or correcting process has to be performed before the molds can be prepared.

As every draughtsman knows, the projections of the lines of the vessel upon the three plans, sheer, body and half-breadth, are mutually

interdependent and this property is utilized in performing the fairing operation. The projections of each of the sets of lines used in this process, that is, the waterlines or level lines, cross sections or square sections, bow lines and diagonal lines, appear straight in one or two of the three plans, so that by the aid of a straightedge they can be drawn fair easily in such plans. Now the property which a wooden or metallic batten has of bending in a fair curve is brought into play in drawing the lines fairly in the plans where they appeared curved. Since the intersections of lines with each other are points, the points of intersection of two sets of lines in one plan are transferred to their relative positions in the others, so that points which appear straight in one plan form a curved line in another. Battens are penned or bent to pass through as many of the points as is consistent with absolute fairness and the line is drawn. Thus, by a series of interchanges between the three plans, or projections of the lines, the various lines are copied from one plan into another until at length all the plans coincide and the lines composing them are continuous curves. The fact that the curves are continuous proves that the body is fair.

It is a great advantage if the seams of the boards forming the floor of the mold loft are perfectly straight and parallel, as they thus afford considerable assistance in the several processes of squaring and drawing parallel lines which are involved in the practice of laying-off.

Time Required for Framing

Mold loft floors usually are painted. Generally a gray color is chosen. When a new set of lines is to be laid down it usually is advisable to repaint the floor in order to completely obliterate all of the old lines. In some cases, however, the floors are not painted, but are left in a natural color. In these yards when new lines are to be laid down, the whole floor is gone over with a cabinet scraper, thus removing the old drawing. White pine, cedar, or other easily worked strips are used for making molds.

As soon as the molds are ready, the process of framing the ship actually may be begun. This process may be divided into three steps as follows: Sawing the frame sections; assembling the sections, or buttocks; and raising the frame.

The time required to frame a ship seems to vary widely in different yards. In one case the writer has been informed that 46 days were required to frame a 250-foot, 4-masted schooner. In this yard the frames were skidded into position and raised by tackle, no cranes being available. In another yard only 15 days were required to frame the square body of a 290-foot ship, using the same method of raising the frames. A gang of about eight to ten men is required, not including those working on the framing stage where a dozen more are necessary. After the main frames are up the smaller pieces of the stearn frame, including the transom, etc., can be framed with a gang of four or five men.

Specifications of Timber Needed

The sizes of timbers necessary and the quantity required for framing a 300-foot vessel are indicated by the following quotation from the timber schedule for standard Pacific Coast type wooden steamship, designed by Mr. Ferris for the United States Emergency Fleet Corp. The standard United States government boat, it will be recalled, is 281 ft. 6 ins. in length overall and 46 ft. beam. It has a cargo capacity of about 3,500 tons on a draft of 23½ feet. The frame timber specifications are as follows:

Net size	Gross size	Length	No. of pieces	Feet B.M.
12 x 32	12¼ x 32	10	100	32,667
12 x 30	12¼ x 30	10	16	4,900
12 x 30	12¼ x 30	10	100	30,625
12 x 30	12¼ x 30	16	12	5,880
12 x 30	12¼ x 30	20	16	9,800
12 x 30	12¼ x 30	24	12	8,820
12 x 28	12¼ x 28	12	16	5,488
12 x 28	12¼ x 28	16	50	22,867
12 x 28	12¼ x 28	16	56	25,611
12 x 26	12¼ x 26	10	100	26,541
12 x 26	12¼ x 26	16	56	23,781
12 x 26	12¼ x 26	16	50	21,233
12 x 26	12¼ x 26	28	20	14,863
12 x 26	12¼ x 26	28	16	11,891
12 x 26	12¼ x 26	30	80	63,700
12 x 24	12¼ x 24	16	56	21,952
12 x 24	12¼ x 24	16	50	19,600
12 x 24	12¼ x 24	16*	5	2,940
12 x 20	12¼ x 20	12	50	12,250
12 x 20	12¼ x 20	16	56	18,293
12 x 16	12¼ x 16	12	56	10,976
12 x 16	12¼ x 16	12	50	9,800
12 x 16	12¼ x 16	14	80	18,293
12 x 12	12¼ x 12	16	80	15,680
10 x 24	10¼ x 24	16*	5	2,400

*And up, average 24 feet.

Shipbuilding at Moss Glen, N. B.

The first wooden vessel to be launched in a number of years in the vicinity of St. John, N.B., is the three-masted schooner built at the village of Moss Glen, on the Kennebecasis River, once famous for its wooden shipyards. This schooner is one of the first vessels that was started during the present revival of the industry around St. John. The keel was laid in February of this year. The frame was finished by the end of July and the work of planking followed, and was completed without delay. The keel of the vessels is 136 feet long, and the schooner measures 155 feet from stem to stern. Her tonnage is approximately 400 tons, and she has a carrying capacity of 800 tons.

The vessel was built by Peter McIntyre, the well-known ship broker of St. John, N.B., and his son, Allen A. McIntyre. The cost of the vessel was $35,000. All of the lumber used was taken from the hills of Moss Glen, within a few miles of the scene of construction.

The shipbuilding plant at Moss Glen covers an area of about three acres, and a large sawmill is located at the back of the village, a short distance away. Moss Glen, about fifteen miles from St. John city, is a small village, and in the seventies of the last century was famous for its shipyards, from which many famous vessels were launched.

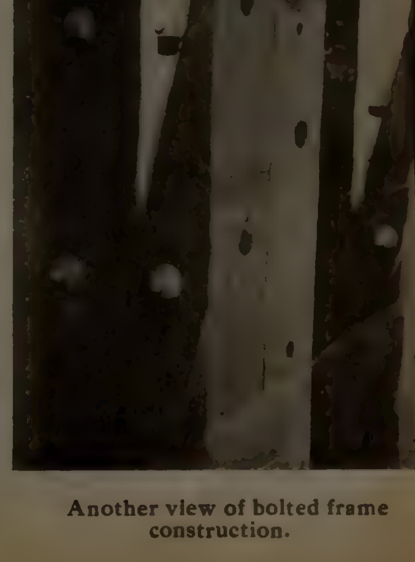
The wood used in the vessel was chiefly birch, spruce, and small quantities of hard pine. It is interesting to note that in the construction of this vessel the curves in the frame timbers were secured from natural curves in the growth of the timber. This method of shipbuilding produces great strength in the frame. The keel of the vessel required sticks 22 x 24 in. at the butt and not less than 17 in. 35 ft. from the butt.

It is reported that the McKean Shipbuilding Company, St. John, N.B., will establish a yard at Dartmouth, N.S., and that they are also interested in a shipbuilding plant now in operation at Liverpool, N.S. The new plant is expected to operate upon the construction of wooden sailing vessels.

Ribbands in place and showing under frame.

Assembling frame futtocks on framing stage.

Detail of bolted frame joints.



Another view of bolted frame construction.

The Sawmill That Made B.C. Fir Famous

Hastings Sawmill, Vancouver, Has Been Manufacturing and Exporting Continuously for Over Half a Century—History of the Company and Its Extensive Operations

The British Columbia Mills, Timber & Trading Company, proprietors of the Hastings Saw Mill, the oldest established sawmill in the province, have the proud distinction of being the largest exporters of lumber in Western Canada, over fifty per cent. of the total quantity exported being credited to it. The existence of its business dates from the year 1865, about the time when lumbering was first started in British Columbia, and it has had an unbroken record of activity ever since. The title of the firm has undergone one or two changes, but since 1889—when the businesses of the Royal City Planing Mills, Vancouver and New Westminster, and the Hastings Saw Mill, were amalgamated, and some years later the Moodyville Sawmill was purchased, with the late Mr. John Hendry as president and general manager of the company, which dual office he held until his death—in 1916—it has been the same as it is now. The present mill itself, however, has always been known by the name of the Hastings Saw Mill, and its history is closely associated with that of the development of the lumber industry of the province.

The business of the company has been a success since its inception in spite of the fluctuations of trade and the financial depressions sometimes felt by the community. This success may very largely be attributed to the strict business methods employed, careful management, and the quality of the lumber product turned out. From the very first the company set itself out to maintain the very highest standard in the manufacture of its products, from which ideal it has never departed; and while continually improving its plant and adopting everything in the way of improved machinery that it deemed wise, it has carefully avoided installing anything at the expense of "good manufacture."

The plant occupies an ideal situation on the south shore of Vancouver harbor, known as Burrard Inlet, the site having been practically the first site chosen on the Inlet. It has been completely rebuilt and modernized several times, and its output has increased from a mere few thousand feet per day to 250,000 feet per day of ten hours, which output can be increased under pressure. Vessels of the largest size can lie alongside its wharves, and it is no uncommon sight to see two or three vessels loading at the same time, while there have been as many as nine loading at once. Altogether the company gives employment to one thousand men.

Timber Supply

The company's timber holdings, which are located both on the mainland and on Vancouver Island, are among the most extensive and the very finest in the country. As the company was early in the field, its holdings were among the very first selections made. The plant was not built for to-day or to-morrow, but with a view to sawing lumber

Illustration shows ships at wharf of the Hastings Saw Mill, Vancouver, B.C.

long after the present generation of lumbermen have ceased to exist. About 55 per cent. of the timber is Douglas fir; 22 per cent. Western red cedar; 10 per cent. Western hemlock; 8 per cent. Sitka spruce; and the remaining 5 per cent. mostly white pine with some yellow cedar.

The accompanying illustrations show trees of Douglas fir and Western red cedar of average size and quality.

Logging Camps

The camps at present are five in number, four of them being situated on the holdings near Rock Bay, Vancouver Island, and the other on Thurlow Island, some three miles distant from Rock Bay, which is within easy towing distance of the mill in Vancouver. The timber is easily accessible, and the land is not rough. The actual logging is being done some twenty miles inland; so that the logs have to be transported by rail to tidewater. The railway, which is of standard gauge and owned and operated by the company, is extended as necessity requires; but owing to the fact that the stands of timber have been so heavy and to the fact that the country abounds in lakes, it

The landing and railway terminus at Rock Bay, V.I., showing the company's hotel (foreground on the left), store (right), and hospital (extreme left)

has not been necessary to extend it more than once during the last three or four years.

The actual location of the camps is as follows: The first camp reached on the railway is the operating camp, which is some fifteen miles distant from tidewater at Rock Bay, and from this camp the line extends another five miles to Roberts Lake, From the operating camp a logging spur, extending a distance of four miles into the holdings, branches off; and about two miles farther along the line another logging spur runs to McNair's Lake, a distance of a mile. On Roberts Lake are two more camps which are located on the side opposite the terminus of the railway. The logs from these camps are dumped into the lake and towed to the railway landing, where they are loaded on to the cars.

The logging equipment is most complete. There are six locomotives of the straight connected type, with seventy logging cars and some thirty donkey engines. At the operating camp there are a large and completely equipped machine shop and locomotive sheds. The trees are felled and bucked in the regular Pacific Coast way, and the logs are yarded and loaded by donkey engines. On arrival of the train at tidewater all the logs are dumped in one operation, which is done by means of a system of cables attached to and operated by the locomotive. Altogether nearly 500 men are employed in the camps and on the railway, of which P. DesBrisay is the resident superintendent.

The company logs also on some of its other holdings, but this logging is done by contract.

Camp Employees

The company knows the value of satisfied employees, hence it sees that the camp employees are provided with comfortable quarters and plenty of nourishing food. The accompanying view shows the company's hotel, store and hospital at Rock Bay. The hospital, which is seen to the extreme left of the view, beyond which are the cottages for various employees, is in charge of a resident medical man, and is equipped with the most modern appliances. There are also a school and a reading room, and religious services are conducted at regular intervals by the Columbia Coast Mission.

Main Mill

The main mill, which is 500 feet by 80 feet, is equipped with a double breakdown 60 inch circular saw, a 10 ft. band mill with 14 inch breakdown saw; and two band resaws, one 9 ft. and the other 8 ft., both with 12 in. saws. The logs are hauled up from the pond on a single log slip, thrown either way and placed on the log deck by a double steam kicker; then rolled on to the carriages, which will take a log up to 116 feet in length, by steam niggers.

After passing the edgers, which are three in number, and the trimmers, the lumber passes farther along on live rolls to be sorted and graded; and then to be distributed to the different departments or to the ocean shipping sheds or wharves on electric railway or motor trucks.

The masts, spars and heavy timbers for immediate shipment pass on live rolls to a point farther along, where they are loaded on to the railway cars by means of a gravity loading deck.

Planing Mill

The planing mill, which has a capacity of 150,000 feet board measure per day of ten hours, is located in a building 200 feet by 100 feet. Its equipment consists of the following machines, namely: one Berlin timber sizer 16 x 30; one Woods 6 x 12; three Berlins 6 x 9 and 6 x 15, all fast speed; one Berlin 6 x 30; one MacGregor Gourlay 6 x 15; one Berlin sticker 6 x 12; one Woods sticker 6 x 15; one Berlin sander 6 x 30; and necessary resaws and trimmers.

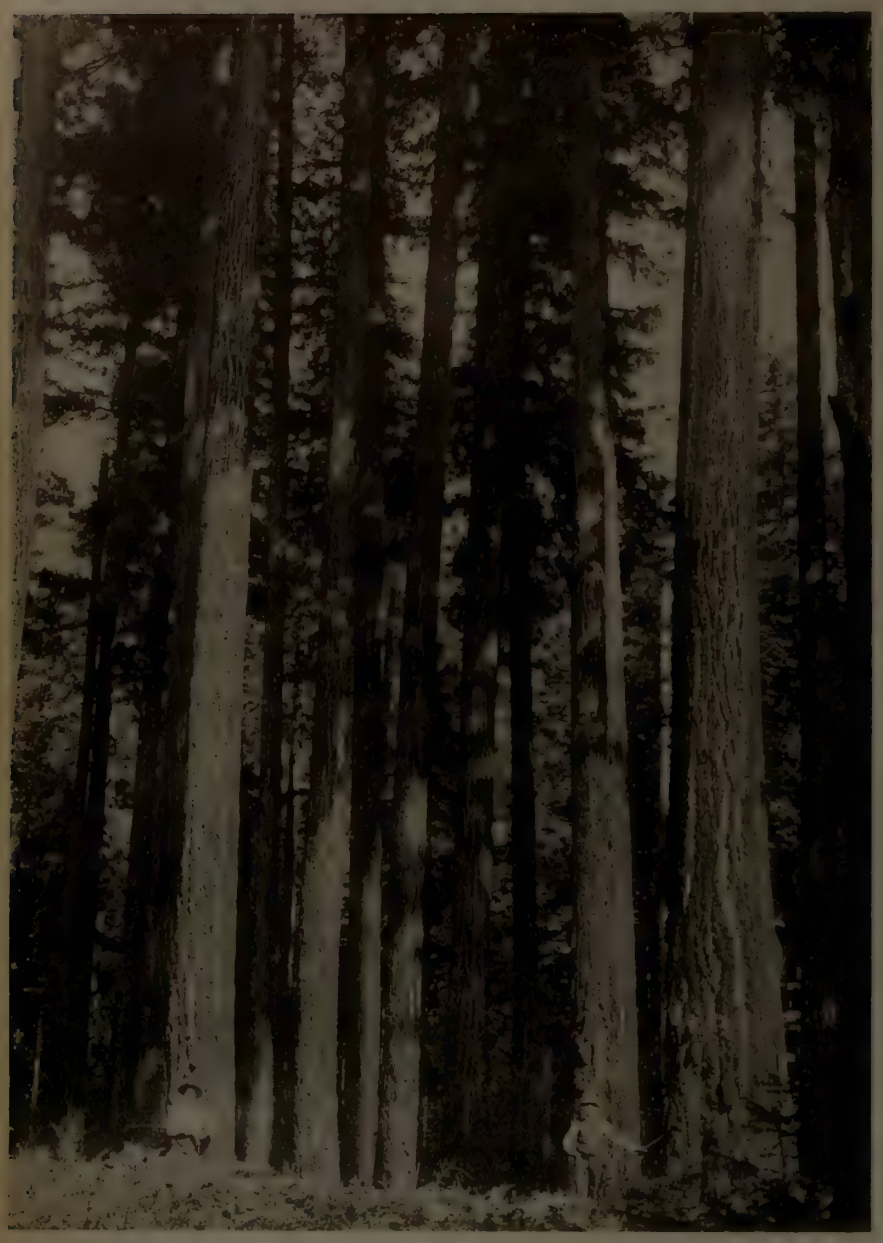
Western Red Cedar seven feet in diameter and 150 feet high

Dry Kilns

A manufacturer may have some of the finest timber to draw from, but he may destroy its qualities through improper drying. The drying process is one that requires an accurate observation and a long experience to perfect. That explains the rea-

Trainload of logs, some over 100 feet long, on the log dump at tidewater, Rock Bay

Trainload of logs on the railway, en route to tidewater



Douglas Fir—The larger trees are from five to seven feet in diameter and from 120 to 150 feet to the first limb—Ideal for ship timbers

son why different manufacturers with the same kind of kiln often obtain very different results. The British Columbia Mills, Timber & Trading Company pays particular attention to the drying of its lumber. It believes that the drying process should be gradual, so that the wood can adapt itself naturally to the change without warping or disrupting the fibre. With the type of kiln in use, which was designed and built by the company, and with an experience covering several decades, it is able to obtain very satisfactory results.

The capacity of the kilns is 150,000 feet board measure per day of ten hours.

Power House

The power for running the plant is generated in 17 boilers of about 3,000 working horse power, and transmitted to the planing mill by a Hamilton twin valve type of engine 14 x 18 in size, of 250 horse power; and to the sawmill by the following Hamilton balance valve type of engines, namely: one twin 20 x 24 in size, 500 horse power, and two singles 24 x 30 of 500 horse power each, and by the necessary small engines for driving the conveyors. In addition to supplying the sawmill, power is also supplied for the electric railway and lighting system; and live steam is furnished for the dry kilns.

Sawdust is exclusively used for fuel, which is fed to the furnaces by automatic feeders.

Other Parts of the Plant

The capacity of the lath mill is between 45,000 and 50,000 lath per day of ten hours. Pickets, broom handles and shingle bands are also manufactured.

The mill is also equipped with hog machinery for cutting up the refuse in case of shortage of fuel; and the plant is equipped throughout with complete blower and conveyor systems.

The equipment of the machine shop consists of three Bertram lathes 24 in., 20 in. and 12 in. in size; planer, shaper, pipe machine, and necessary drills, bolt cutters and tools.

The filing room, which is located above the mill, directly over the sawing units, is one of the largest and most completely equipped filing rooms in the country. The main equipment consists of three Covel machines, which will take 20 in., 16 in. and 13 in. saws respectively.

Yard and Stocks

The company has spacious and well ventilated storage sheds that are conveniently arranged for ready access to stock. The main storage shed for dressed and finished lumber is 300 feet by 60 feet; and the main ocean storage shed is 200 by 150 feet. A feature of the plant is the large amount of wharf space for the huge long Douglas fir timbers for ocean shipment, the large proportion of which are from 65 to 110 feet long, some of them longer.

Recently the company had 3,500,000 feet board measure of such timbers awaiting shipment to Great Britain, the actual shipment being over 4,500,000 feet by one steamer. The accompanying illustration shows this vessel loading these long timbers.

In ordinary times the company has large stocks of rough and dressed Douglas fir, Western red cedar, Western hemlock and spruce lumber, but owing to the unprecedented demand its stocks are comparatively low at present.

Fire Protection System

The fire protection system is modern to the last feature. A complete sprinkler system served by water from the city mains is installed throughout the plant, and there are also many hydrants connected to the mains, placed at suitable points in the yard, and lengths of hose in the mill attached and ready for immediate use. There is also a 50,000 gallon water tank placed at a height of 84 feet, and connected to the sprinkler system, for use in case of an emergency.

The purchasing of supplies, and of provisions for the logging camps and tug boats, is a large and important part of the company's business. It is entrusted to a separate department, which is in charge of Mr. W. F. Frame. A large and well stocked store is run in connection with it, which is patronized not only by the employees, but by outside families. It is interesting to note that the Hastings Mill Store was the first store in what is now Vancouver.

Transportation Facilities

In the early days there was no railway communication with the interior, consequently practically the whole of the output of the mill was exported overseas; hence it is that for over half a century the mark H. S. M. on masts, spars and timbers of Douglas fir has been known in ports the world over, and has been recognized to stand for the highest quality. It was not until the year 1886 that it was possible to communicate by rail with the prairies and the east, in which year the Canadian Pacific Railway completed its transcontinental line to Vancouver. Since that time three other railways have made Vancouver their terminus, and the company's products can now be shipped by all rail routes to practically every part of the continent. With wharfage accommodation, therefore, for ships of the largest size, and the line of the Canadian Pacific Railway (which connects with the

Log deck, main mill

Masts 125 ft. long for B. C. ships

other lines), running immediately by the plant, the company has exceptional transportation facilities, which make possible an expeditious and economical method of shipping the lumber, an advantage that enures to the benefit of the company's customers.

Sales and Distribution

The general sales offices of the company are situated at the foot of Dunley Avenue, Vancouver. The following are the managers of the departments:—Foreign sales, A. W. H. Curtis; car sales, T. N. Brown; local and Coast sales, F. Moore.

The company's representatives are the following, viz.: Middle West, H. S. Galbraith Co., Ltd., 612 McIntyre Block, Winnipeg, Man.; the East, Terry & Gordon, Confederation Life Building, Toronto, Ont.; Mason Gordon & Co., Montreal, Que.

The company counts among its customers some of the largest buyers, including the Government of the Dominion of Canada, and governments of various other countries, than whom there are, perhaps, no buyers who are more strict in their specifications and requirements; several of the largest railways, both on this continent and in other parts of the world; and many shipbuilding and mining companies, and harbor boards, who have been supplied with a large proportion of

A fine Douglas fir, diameter 7 ft. 6 in. and 120 ft. to the first limb

their requirements. It makes a specialty of spars and long timbers, and it is a large shipper to all parts of all the higher grades of lumber, flooring, ceiling, and finish of all kinds.

Although the British Columbia Mills, Timber & Trading Company has so large an exporting business, it has always realized the value of the market of the great prairies, in the building up of which it has played so large a part. Millions upon millions of feet of lumber have been shipped to it. Whether it has been lumber for use on the farm, for houses, for bank offices, for railway construction, it has always been one of the first in the field in all districts. The H. S. M. brand has made its impress upon the trade; it is a standard of excellence, consequently consumers know that they get the very best when they buy it.

The following, which appeared in a previous issue of the Western Lumberman, was contained in a report issued by the Dominion Department of Trade and Commerce on the subject of the lumber trade of Canada with foreign countries:

> "This does not mean to say that Canada has done no business with the West Coast of South America. Occasionally shipments do go down, and doubtless these were more

Loading timbers at the mill wharves, the large proportion of them being from 65 to 110 feet long and from 12 x 12 to 24 x 24 inches square. Cargo over 4,000,000 feet board measure. As far as is known this is the largest cargo on any one vessel, shipped by any one mill on the Pacific Coast.

> frequent in the past. One mill, the Hastings, was apparently well known, and importers in Chile and Peru spoke most highly of the treatment they had received from it. This firm seems never to lack orders and is a shining example of the value of a good name in international trade."

The company has many other and similar testimonials from various foreign markets.

Company Offices

The offices are situated in the mill grounds. The building is of the two-storey bungalow type. On the ground floor are the main office, the foreign and car sales offices, the board room, the reception room, and five other rooms all handsomely finished to represent either Douglas fir, Western red cedar, Western hemlock, or Sitka spruce, the principal woods of the province, in their finished state, which visitors are always welcome to inspect. Upstairs are four other rooms, including the draughting and map room, and the offices of the B. C. Mills, Tug and Barge Company, Limited.

The last mentioned company, which is a subsidiary company of the B. C. Mills, Timber and Trading Company, has a fleet of five tugs, two launches, and about a dozen barges and scows. The tugs are used, as has been said, chiefly for the purpose of towing the booms of logs from the company's holdings to the mill ponds in Vancouver. They may also be chartered for towing purposes.

The Executive Personnel

President and general manager, Eric W. Hamber; general superintendent, Arthur J. Hendry; secretary, J. Alex. Hendry; comptroller, Thos. Sanderson.

The operation of any large business enterprise reflects to a large extent the personality of the executive head. He must be able to surround himself with heads of departments who are capable and reliable, and interested in seeing the plans successfully carried out. Such an organization has President E. W. Hamber, who is head of this extensive business.

Mr. Arthur J. Hendry, Mr. J. Alex. Hendry and Mr. Thomas Sanderson, are highly valued and capable officers of the company, of many years' standing. They have a thorough practical knowledge in their respective departments of the work pertaining to the lumber industry, and various other activities of the company.

Booming grounds, tidewater, Rock Bay

Sponsors to B. C. Shipbuilding Industry

Cameron Lumber Co., Ltd., Victoria, Decided to Construct Wooden Vessels Against the Advice of "Experts"—Action Brought Prosperity to Lumber Industry.

It probably will interest readers of this journal to learn from an authoritative source the facts connected with the inception of shipbuilding in British Columbia. The story is attractively told in the following report of an address delivered by President J. O. Cameron, of the Cameron Lumber Company, Ltd., Victoria, at the fourth annual meeting of the Pacific Coast Association of Port Authorities, held at Portland, Ore, on Sept. 5 last:

"Since I know nothing of the science or art of ship construction, whether of wood or steel, my remarks will be devoted to the new industry of building wooden ships at my home city, Victoria, British Columbia. By way of preface, I should tell you that for many years I have been engaged in lumber manufacturing. A considerable portion of the output of our mills went overseas, to various markets. If this great war had not happened, with its attendant destruction of ships by mines, raiders, and submarines, I should never have thought of building any sort of ship.

"I do not need to remind you that all trade and commerce was paralyzed for many months after the breaking out of the war, which condition seemed to be particularly hurtful to the lumber business in British Columbia fully a year before signs of a revival of business began to appear. The mills in which I am interested began receiving numerous requests for prices of lumber c.i.f. British, South African, and Australian ports. We soon found, however, that we were in no better position, for the reason that we could not find ships to carry the lumber to its destination.

"After thoroughly considering the whole situation, I decided that our lumber mills were rapidly approaching financial ruin unless some means could be found for transporting a considerable portion of their output to overseas markets. My associates and myself started enquiries to find one or more ships which might be purchased or chartered at reasonable prices. Offers received seemed altogether unreasonable, although time has proven that we refused some great bargains. After failing to secure regular carriers for our products by purchasing or chartering, we began investigating the possibilities of building ships. We were told by naval architects and shipbuilders that wooden ships were not worth considering; that they were expensive to build and poor cargo carriers, etc. We found on the other hand, that to establish a regular shipyard to build steel ships would require the investment of a large amount of capital; and, furthermore, that the steel which would be required for building the ships would be very costly, and that no firm promise for delivery of a definite quantity could be obtained. Therefore, for the two reasons, namely, want of capital to establish the shipyard and inability to contract for the steel, we had to dismiss all ideas of building steel ships. There was nothing further to consider except 'wooden ships' or 'no ships.' The experts said: 'Wooden ships are little better than no ships.' I thought a great deal over the matter, and as I pondered, some of the great outstanding facts of history came to my recollection. I was reminded that the Nina, Pinto, and Santa Maria, the three ships that bore Columbus and his companions across the Atlantic to discover the Western hemisphere were small wooden ships; that the first American man-of-war to bear the Stars and Stripes flying at her peak, hoisted there by America's most picturesque naval commander, John Paul Jones, was the good ship 'Ranger,' the ship that carried to France the despatches which brought about the Franco-American alliance, the ship which carried her redoubtable commander to victory against the British sloop-of-war 'Drake,' and the 'Ranger' was built of wood; also that Lord Nelson's flagship 'Victory,' which bore him as he swept the combined navies of France and Spain from the high seas at Trafalgar, likewise was built of wood.

"Thoughts of these glorious deeds led on to consideration of the peaceful pursuits which followed. I remembered that the ships which carried the commerce of Britain and America to the four corners of the earth were all built of wood; that within the memory of many people living to-day no ships had ever been built except of wood. The first iron ship was launched in 1850, and the first steel ship was not built until 1880, which is within my own recollection. I decided that if wooden ships had been useful throughout so many ages they could still be made to serve a useful purpose. There were great forests of suitable timber in British Columbia, plenty of idle men to do the work, and sawmills, all but idle, to cut the timber. Nothing, therefore, remained to be done except to arrange for financing the enterprise and to find a man or men skilled in the all but obsolete industry of building wooden ships.

"In the fall of 1915 others who had been thinking along the same lines with myself were quite willing to join in an agitation for government assistance to get the industry established. All public bodies and organizations in Victoria, including the Inner Harbor Association, went on record as being in favor of the government granting a measure of assistance. Deputations waited on the Premier and Ministers of the Province of British Columbia, and the suggestions made were favorably received, with the result that an act to encourage shipbuilding was passed and became a law on the 31st day of May, 1916.

"Immediately after the enactment of the legislation my associates in the sawmill business organized a shipbuilding company, called the Cameron-Genoa Mills Shipbuilders, Ltd. All of the capital was supplied by the Cameron Lumber Company, Ltd., and the Genoa Bay Lumber Company, Ltd., which accounts for the name of the new organization. It would not be proper for me to fail to mention the fact that this industry owes its inception in British Columbia largely to the efforts of Mr. R. T. Elliott, K.C., the president of the Genoa Bay Lumber Company, Ltd., and the enactment of the measure encouraging this industry to Mr. H. B. Thompson, who was at that time a member of the British Columbia Legislature, and took charge of the bill and worked unceasingly thereon until it became a law. He was then made chairman of the commission appointed to administer the law, and continued to lend every assistance in his power. As soon as possible a site was secured on the shore of Victoria Inner Harbor, and the work of erecting necessary buildings and installing machinery was rushed with all possible despatch. Three keels were laid down in rapid succession.

Brought Prosperity to Lumber Industry

"But I am getting ahead of my story. In the first place, we needed an experienced naval constructor, and, after searching far and wide, we discovered Mr. J. H. Price, of Portland, Ore., who was at that time putting the finishing touches on the big wooden schooner 'City of Portland,' at St. Helen's. He was induced to come to British Columbia by Mr. H. W. Brown, of the Canada War Coast Navigation Company, Ltd., who was taking a most active interest in the new enterprise. Mr. Price at once saw the many advantages which Victoria had to offer for the carrying on of the industry, and became associated with us. His plans for the ships were adopted, and he was charged with the supervision of the work. On his recommendation, Messrs. Dean and Lloyd Johnson (brothers), who had been running a shipyard in Seattle, were engaged to take charge of the actual work of putting in the buildings and machinery at the yard and of carrying on the construction. The Johnson brothers came to Victoria and started the work on the fifteenth day of June, 1916, which date, I believe, will come to be remembered as the day when prosperity returned to Victoria. For more than a year previous to that date our sawmills had operated at a loss, business was at a standstill, men tramped the streets looking for work. It was only a few months thereafter before several hundred men were employed in the shipyard, where large quantities of lumber were being used up; new logging camps had to be opened up; men were engaged in the woods to get out knees and spurs and masts; our mills were operated to capacity. To-day the monthly payroll at this one shipyard is $60,000.

"The first ship (christened 'Margaret Haney') was launched on the third day of February, 1917. Long before she had been chartered to carry a cargo of lumber to Australia from one of the British Columbia mills. Immediately after the launching of the 'Margaret Haney' the keel of the 'Malahat' was laid down. In rapid succession the ships 'Laura Whalen' and 'Esquimalt' were launched, and other keels were laid in their places. Now the 'Malahat' has been launched, and will be ready within a few days to receive her cargo, which the Cameron Lumber Company and other British Columbia mills are cutting to send to Australia. There are now on the ways at the Cameron-Genoa shipyard four ships, two of which are being built for the British Government, according to plans prepared by the Imperial Munitions Board. They will be steam schooners and will have no sails. Mr. Price, the president and general manager of the Cameron-Genoa yard, advises that the company has undertaken to build four of the steam schooners for the British Government, and has the option to build two additional.

"Another company, called the Foundation Company of British Columbia, Ltd., has established a shipyard on the water-front of Victoria Inner Harbor, immediately adjoining the yard of the Cameron-

Genoa Company. This new company began work about the 1st of July, 1917. They had three keels laid and the framing of one ship almost completely up when I left home yesterday. This company is devoting itself entirely to building ships for the British Government. Contracts for twenty-five of the wooden steam schooners have been let to the shipyards in Victoria, Vancouver, and New Westminster, and the work thereon is being rushed with all possible speed.

"The vessels built from the Price plans are all five-masted schooners, equipped with auxiliary gas engines, and designed primarily for lumber carriers. They are 253 feet long, 44 feet beam, and 21 feet depth of hold. Those which have been loaded have carried between fifteen and sixteen hundred thousand feet of lumber. Their performances have been quite satisfactory—in fact, equal in every respect to expectations. The ships being built for the British Government in the British Columbia yards are of an entirely different type. They will have no sails, will be propelled with steam engines, and are designed for general freight carriers. They are all to be built from one plan, and will be 275 feet long over all, 44 feet beam, and 25 feet depth of hold. These wooden ships may not be as serviceable as if built of steel, nevertheless they will be of great use. First, they will help to win the war, and after that each will carry many hundreds of tons of freight to England, France, and Belgium—articles necessary for rebuilding and restoring the countries which have been devastated by the war.

"A recent copy of the London Times makes a statement that the net losses of British merchant ships for the first eight months of 1917 amount to 676 ships, of a tonnage of 2,550,000. This figure takes into account all the ships which have been built during the said period, and does not include the ships of any other nations. It is, therefore, quite evident that the number of ships being built must be increased or the destruction stopped, if we are to continue to have ships for carrying on our commerce.

"We have thoroughly demonstrated the utility of the wooden ship, and I contend it is a duty which Americans and Canadians alike on this Northwest Coast owe to their countries generally, and their own businesses in particular, to lend every assistance to the production of ships built of our native Douglas fir timber."

Toronto Shipbuilding Company's Operations

One of the companies which have received contracts for the construction of standard wooden vessels for the Imperial Munitions Board is the Toronto Shipbuilding Company, Ltd., whose office and works are located at the foot of Cherry Street, Toronto, on the new industrial property created by the filling in off Ashbridge's Bay. The company has contracts for two standard wooden vessels, one of which is already well under way, and will be launched about the first of May. The company expect to launch the second vessel about the first of June.

The vessel now under construction has been laid down on a site parallel to the ship channel, into which it will be launched. Since the framing work was commenced, a short time ago, good progress has been made, and most of the framing has now been completed. When the company is operating fully it will give employment to about 200 men.

The plant and equipment of the Toronto Shipbuilding Company includes a moulding loft 85 x 45 feet, a mill 85 x 67 feet, yard, offices, etc. The equipment of the loft includes one 36 in. band-saw for cutting the moulds, and a carpenter's outfit. The equipment of the mill, which is located on the ground level beneath the moulding loft, includes one 48 in. Fay & Egan bevel ship-saw; one band-mill, 24 in. x 32 in.; one 8 roll 20 x 30 in. Boss timber sizer; one 48 in. cut-off saw; one 40 in. band-saw; one saw table; one jointer; one single surfacer; three 5-ton cranes; one locomotive crane; two derricks, and a complete saw-filing outfit.

Propeller post for one of the Toronto Shipbuilding Company's standard wooden vessels.

The plant is operated by individual motors, totalling 150 h.p. A 60 h.p. boiler supplies steam for the wood steaming boxes and for two air compressors.

The company's yard covers an area of 600 x 200 feet.

The vessel is being constructed of British Columbia fir, which is being used for the frames, keel, planking, etc.—in fact, for everything except the rubbing or fender streaks and the bulwark rail, which are to be of oak. The keel, also, will have an oak shoe 3 in. deep.

The Toronto Shipbuilding Company, Ltd., is incorporated under the Ontario Companies Act, with $100,000 authorized capital. The following are the officers: C. S. Boone, president; J. E. Russell, vice-president and managing director; C. A. Boone, second vice-president; J. M. Russell, secretary; J. J. Manley, treasurer, and C. L. Hays, engineer and superintendent.

With the launching of the Malahat, the fourth schooner to take the water from the Cameron-Genoa Mills Shipyard, Victoria, and the schooner Mabel Stewart from the Wallace Shipyard No. 2, North Vancouver, the fifth schooner to be launched for the latter concern, only three more vessels of this type remain to be launched by these yards under the present program, two of which are nearing completion at the plant of the Cameron-Genoa Shipbuilders, Ltd., and the other being well along at the Wallace yard. After completing the fleet of twelve ships, all of which are of the auxiliary schooner class, half of which were ordered at Victoria and half in North Vancouver, both of the yards mentioned will give all of their attention to the building of wooden steamers for the Imperial Munitions Board.

The Merchants' Shipbuilding Corporation has been incorporated at Victoria, B.C., to carry on a shipbuilding business at Vancouver, with a capital off $500,000.

Bevel band-saw in operation upon framing timbers at Toronto Shipbuilding Company's plant.

View of operations at Toronto Shipbuilding plant about October 17, showing frames partly erected—Mill and moulding loft on the right.

Submarine Chasers

The accompanying illustration shows one of the fast motor boats known as submarine chasers, which were built in Canada for the British Government. About 550 of these vessels were built in one shipyard. They are twin screw, gasoline-driven boats, and practically of a new design. The dimensions are: Length over all, 80 ft.; beam extreme, 12 ft.; depth at side, from top of rabbet to top of beam, 6 ft.

They are furnished with two standard right and left gasoline marine engines, having six cylinders 10 x 11 in. and developing 220 h.p. The engines are fitted a short distance aft of amidships. With this power plant a speed of 20 knots was easily exceeded. Fuel is carried in four tanks. The boats have fine lines and are handsome

One of 550 Submarine chasers built in Canada for Great Britain.

looking, and when running at high speeds leave a good, clean wake. They are flush decked, with a small steering and chart room just forward of amidships, and also a small house or casing over the engine gun, while aft is a lifeboat about 14 ft. long.

The hulls are subdivided by five steel and one wooden watertight bulkheads. In the forepack is a storeroom for provisions, etc.; also gasoline tanks, behind which is a crew space, with ample accommodation for eight men, while aft are smaller but more comfortable quarters for two officers. The floors in the living quarters are covered with linoleum. The engine-room floor, of white oak, is covered with light sheet metal. Hinged hatches and ladders lead into the storeroom and crew's quarters; also the engine and dining-rooms. A companionway, with slide and steps, leads down to the staterooms. The keel and stem are of white oak, 1¾ in. frames. 2½ in. deck beams, and 2¼ in. roof beams of the same material. The keelsons and planking are of yellow pine, bulkheads and cabin top of white pine decking, and cabin sides of Oregon pine. The rudder is of the outboard balanced type, and is made of manganese bronze, as are also the propellers.

Fraser, Brace & Co.'s Operations at Montreal

The site of the new shipyard of Fraser, Brace & Co., Ltd., is on the Lachine Canal, in the Cote St. Paul District of Montreal. The company has contracts for four standard wooden ships for the Imperial Munitions Board. The area of the site is approximately eight acres. The Canadian Pacific and the Grand Trunk Railroads are on either side, so that freight can be received from both. A complete installation of modern equipment for wooden shipbuilding has been made.

Advantage has been taken of the existence of an old slip opening into the canal at this point. The entrance to this slip has for its sides the concrete abutments of the bascale bridge on the C.P.R. The distance between the abutments is the same as the width of the locks of the canal. This slip is being deepened to a sufficient depth of water to permit the side launching of vessels, and is being lengthened to 600 feet, or more than twice the length of a canal-size vessel. Stop-logs are to be used to cut off the water from the canal so as to permit the drying of the basin, which is thus used as a drydock. Two vessels of the four now contracted for will be built in the bottom and launched by simply flooding of the drydock. The other two will be built on the sides to be side-launched into the dock. There is room for the construction of two other vessels in the bottom and at least two other vessels on the sides.

Buildings have been erected for offices, stores, air compressor, transformers, sawmill, carpenter shop, blacksmith shop, machine shop, and framing. A mould loft, 150 ft. x 50 ft., has also been provided.

The power to be used will be electric, the sawmill, compressor hoisting equipment, etc., all being electric motor-driven.

Timber of many kinds will be used for the four 2,500-ton boats at present under way, including Oregon fir and British Columbia fir. Local hardwoods are to be employed to a certain extent now and in the future vessels it is planned to develop the local supply so that boats can be built with only a small proportion of timber brought from distant points.

Government Assistance Suggested for Wooden Vessels

Editor of Canada Lumberman:—Allow me to suggest that, while the present assistance and encouragement given by the government to the builders of wooden vessels on specifications and of material in accordance with a standardized plan is admirable, it might wisely be extended to all responsible and reliable parties prepared to undertake the construction of vessels of five hundred tons and upwards suitable for ocean freight carrying. There are places on the St. Lawrence and in the Maritime Provinces where such ships could be constructed principally of birch and spruce, woods readily obtainable at no great distance from the shipbuilding sites, and there are competent men ready to undertake such construction, with encouragement and reasonable, while not in a position to meet the government requirements for a standardized vessel of large size. There is a present shortage of the timber as specified by the government, but an abundant supply of suitable spruce and birch, which would be the principal material in the building suggested. It is quite clear there will be employment for long to come for ocean-going vessels of any size, and small vessels, while they have drawbacks, certainly have the present advantage of dividing the risk.

Yours truly,
Ed. HarperWade.

Toronto's New Drydock

The development of the shipbuilding industry and the prospective increase in the number of vessels plying the Great Lakes has made it all important to such a Great Lakes port as Toronto that it should have a good drydock in which vessels can be hauled up for repairs. The Toronto harbor commissioners realized this at an early date, and their efforts to secure a drydock recently resulted in the installation of a large and modern drydock in the new ship channel at the foot of Cherry Street. The accompanying illustration shows the drydock, with its first ship hauled up and being repaired. This is the first drydock of its kind in Toronto. It was built in three sections, each 65 feet wide, and was brought to Toronto from Sturgeon Bay, Wis.

The Toronto Drydock Company, Ltd., has been incorporated under the Ontario Companies Act, with $100,000 authorized capital and office at Toronto, to take over a drydock or drydocks, at Toronto, and to build, own, and operate steam and other vessels. Among those interested in the company are C. S. Boone, president, and J. E. Russell, vice-president and managing director Toronto Shipbuilding Company; L. Solman, manager Toronto Ferry Company; J. J. Manley, and H. Dickson. The dock is a small one, capable of handling vessels up to about 160 ft., and is somewhat in the nature of an experiment. It is said that if there is sufficient inducement in the way of vessel repairs, etc., the company will build a modern floating drydock to accommodate the large type of lake vessels. The company is stated to have made application to the Dominion Government for a subsidy.

A vote was passed recently in the House of Commons to appropriate $600,000 for the construction of wooden ships in British Columbia. When completed they will trade between Pacific Coast ports and Atlantic Coast ports.

Toronto's New Drydock.

The Duke of Devonshire, Vice-President of the Navy League for the Empire and Patron of the Navy League of Canada.

The Navy League of Canada

Affiliated with The Navy League of the British Empire

In all times and in all struggles the Nation with the Sea-borne carrying power properly defended has been triumphant. This war has demonstrated as never before the absolute dependence of all parts of the Empire upon its Naval Defence and its Mercantile Marine.

Realizing this, a number of citizens have already banded themselves together in different parts of the Dominion to organize the Navy League on the following general lines:—

1—The Governor-General as Patron of the Dominion; the Lieut.-Governors as Patrons of their respective Provinces.
2—A Provincial Branch with a President, a Vice-President and an executive; the Provincial Presidents elect from amongst themselves a Dominion President and together they form the Dominion Executive.
3—Each Provincial Branch retains its autonomy, but contributes a certain portion of its funds to carry on the Dominion Organization, and they in turn contribute a certain proportion to the parent Navy League of the Empire. In order to bind the Naval interests of the Empire more closely.

The work of the Navy League is not new to Ontario, Toronto holding a warrant of the year 1895, Number six in the series for the whole Empire. At a meeting recently convened at Government House by Sir John Hendrie, K.C.M.G., C.V.O., Lieutenant-Governor of Ontario, at which there were present many influential citizens of Toronto and elsewhere, it was determined to continue and extend the work under that warrant as a Provincial Charter.

The Constitution to be operative in Canada is that received from Great Britain, and is similar to the Constitution of the Navy League of Australia, New Zealand and South Africa. The principal objects are as follows:—

1—Thoroughly organized educational campaign in matters pertaining to the Navy and the Mercantile Marine.
(a) By Lectures.
(b) By the circulation of Literature.
(c) By placing Readers in Public Schools.
2—To raise funds for the relief of British and Canadian Sailors and their dependents, and for Sailors' Homes, Institutes and Hospitals in Canada and throughout the Empire.

It is known that out of the millions of tons in merchant shipping that have been sunk during the war the dependents of crews who have lost their lives are in many cases in dire necessity. There is no patriotic fund or pension system covering their cases, notwithstanding that this class of the community is to-day really the most important and the one on which we depend the most, for without sailors to man the ships our products both from the mine, field, factory and fisheries would not reach their destination; the trade of the Empire would cease, and the countries of the Empire open to invasion.

3—To encourage volunteer Naval Brigades for boys and young men in which they can receive practical and theoretical instruction in seamanship to prepare themfor service in our Mercantile Marine or the Navy.
If we are to become a greater exporting nation we must now commence to educate our boys and young men in seamanship. Unless something is done in this respect the Canadian Sailor will cease to play his part in the Dominion or the Empire.

TO THE SECRETARY OF
THE NAVY LEAGUE OF CANADA,
34 KING STREET WEST, TORONTO.

Please enrol my name as

Ordinary Member / Founder / Junior Member } .....

of the Navy League of Canada for which I enclose annual subscription

of .....

I, having read or being already acquainted with the objects for which the Navy League of Canada was established and now exists, do hereby declare myself to be in full agreement therewith, and the policy indicated therein, and undertake so long as I remain a member of the League to support such objects of policy.

NAME .....

ADDRESS .....

.....

MEMBERSHIP

1—FOUNDERS (elegible only to those who enter the first year of the organization; these are life members) $100.00
2—MEMBERS .....$5.00 Annually
3—ASSOCIATE MEMBERS ..... 1.00 "
4—JUNIOR MEMBERS (18 years and under) .25 "

You are earnestly requested to become a member and use every effort to obtain others, and if you have young people in your family enroll them as Junior Members.

To every member will be given a Navy League Badge and Each Founder and Ordinary Member will be sent bi-monthly free the **illustrated magazine "THE NAVY" and other literature.**

The Constitution provides for local committees to be formed throughout the Provinces. We now wish to enroll members in each community to aid in the work of organization.

Commodore ÆMELIUS JARVIS, S.S.D.
President Ontario Branch

Steel Shipbuilding in Vancouver

J. Coughlan & Sons' Operations—Six Vessels Under Contract—Extensive Timber Consumption

While this issue deals particularly with wooden shipbuilding, it would not be complete without some review of the steel shipbuilding operations now in progress on the Canadian Pacific Coast.

The principal steel shipyard in British Columbia is that operated by J. Coughlan & Sons, one of Vancouver's pioneer concerns. This firm has undertaken the construction of six steel steamers of 8,800 D/W tons capacity, for delivery during 1917 and 1918. These boats will be 427 feet long, 54 foot beam, depth moulded 29 feet 9 inches, and with a speed, light, of about 11½ to 12 knots. The design will be after the well-known Robert Dollar type, with some minor modifications.

The capacity of these vessels will be about 490,000 cubic feet. Their permanent coal bunkers will carry 420 tons, and they will have also a reserve coal bunker capacity, available either for coal or cargo of 900 tons. Their fresh water tanks will carry 200 tons. They will be single-screw vessels of the cargo steamer type, with poop, bridge, and forecastle, the machinery being amidships. The vessels will have two masts, with four five-ton cargo booms on each mast, and two derrick posts, each fitted with one three-ton cargo boom.

They will be driven by steel turbines, designed for 2,500 s.h.p. at 100 r.p.m., which are being purchased in the United States, while the boilers are to be constructed at the shops of J. Coughlin & Sons, Vancouver, B.C.

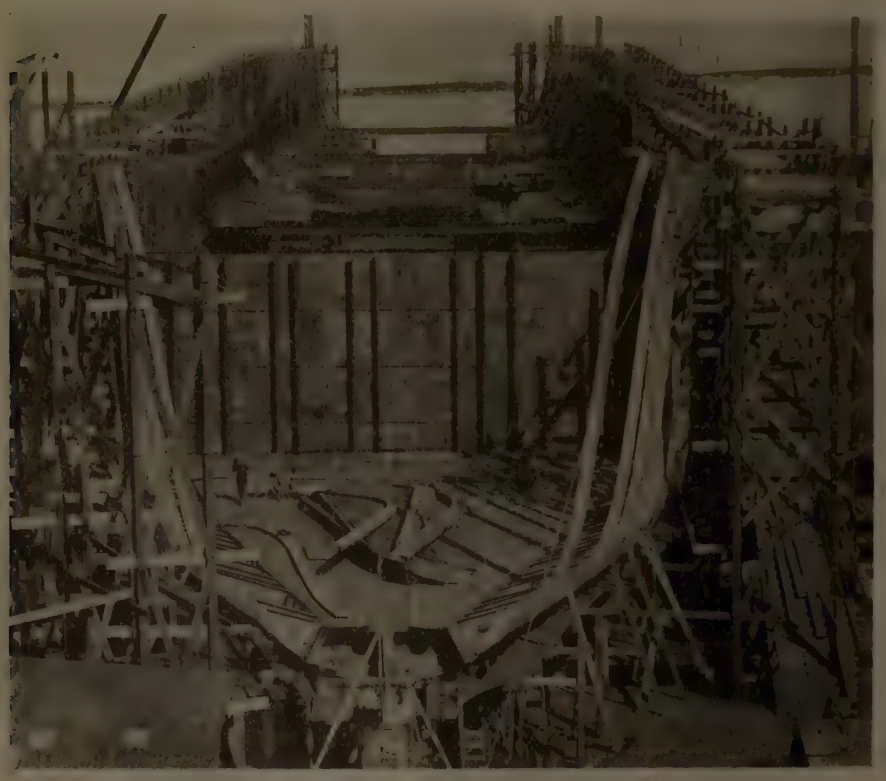
The vessels will be built under the survey of Lloyd's register of shipping to Class 100 A1.

The construction of these steamers will ultimately give employment to about one thousand men and provide for Vancouver a pay-roll of approximately $100,000 per month.

The execution of contracts of this magnitude in Vancouver indicates great courage and resourcefulness on the part of this firm, as many costly difficulties had to be overcome. The equipping of the plant for the construction of these vessels required an investment running into many hundreds of thousands of dollars, and on such of this equipment as was imported from outside of Canada, which comprised the greater portion of it, full duty had to be paid. Then on all the materials, machinery, and equipment for the boats which is imported from outside of Canada 1 per cent. duty must be paid.

It should be further borne in mind that the freight rate from the steel mills to Vancouver is higher than that existing to any of the principal American shipyards, even those yards located on the American Pacific Coast having lower rates of freight than are applied to Vancouver.

All of these factors constitute costly handicaps under which Western shipyards are obliged to operate, and these will have to be overcome or equalized in some way by the Canadian Government if steel shipbuilding is to become a permanent industry in British Columbia.



Steel ship being built at plant of J. Coughlan & Sons, Vancouver, B.C.—Note large quantity of timber used in this work.

The construction of these vessels will require approximately 3,500 tons of steel plates, shapes and rivets for each vessel, this being in addition to any material required for the boilers, engines, or mechanical equipment of the boats.

Barienger Brake Used in War Lumbering

War is the great test of equipment. To give satisfaction in war operation a machine or a device must be sturdy, must do what it is supposed to do without breakdown, and must not impede any enterprise in which it has a part. The lumber industry both of Canada and the United States takes great pride in the regiments of forest engineers that are either going to Europe or are already in Europe rendering effective aid in the war against Germany. Consequently, every precaution is taken to see that only the best and most dependable equipment is provided for these units.

The Ryther & Pringle Company, of Carthage, N.Y., manufacturer of the well-known Barienger brake, recently received an order for and has shipped to the British War Office twelve Barienger brakes, for the use of the Canadian forestry battalions in their operations overseas. In the overseas lumbering operations, both close to the firing line and in locations far removed from actual fighting operations, the timbered country is very rough, and consequently the problem of transporting logs and lumber to the portable mills calls for the very best sort of logging equipment. Timber must be cut wherever it is found, roads have to be changed frequently, and the supply of timber must be kept going to the front all during the winter. Assisting in this the Barienger brake is of much help. It does not weigh enough to prevent its being easily transportable; it is strong and entirely dependable; it is easy to operate, and not easily broken or put out of order; and permits loads to be safely and speedily got down hills that it would be impossible to negotiate without its aid. All of these things have been proved in Canada and the United States, where the brake has been giving absolute satisfaction in many winter logging operations.

The Ryther & Pringle Company is urging that all orders for the brakes be rushed. The company has a good supply of Barienger brakes on hand and can make prompt shipment, but because of the scarcity of ⅝ in. improved plow steel cable, which is the grade and size of steel rope used in connection with the brake, is unable to give definite assurances of the delivery of cable this winter. The extensive requirements of the government are responsible for this condition, as the wire rope is being used in making the nets employed to protect harbors against submarines. Of course the company has large orders with the manufacturers of this grade of wire rope, and will receive shipments just as promptly as it is possible to make them, and also has on hand a supply of rope sufficient to last for a time. However, there is no certainty when the government will have finished its work, and so customers are being warned against the possible shortage.

Preston Woodworking Machinery Co.'s Adjustable Ship Band Saws

The great revival in wooden shipbuilding which has taken place in Canada and the United States is responsible for a widespread interest in lines of woodworking machinery that are specially adapted for preparing ship timbers. One of the most important machines in the equipment of a wooden shipbuilding mill is the adjustable ship band-saw. The Preston Woodworking Machinery Company, Ltd., whose advertisement appears elsewhere in this issue, turn out a machine of this class, known as their No. 133 Preston Adjustable Ship Band-saw, which is greatly appreciated by those who have installed it. The use of this machine increases the production of the mill and results in a great saving of labor. The Imperial Munitions Board, for whom machines of this class were installed at Vancouver, writing to the company, say: "The reports we have from our yards are very satisfactory, and undoubtedly the Preston saw will be requisitioned and supplied if our equipment has to be increased in the future." The Preston Woodworking Machinery Company, Ltd., have supplied two dozen of these machines to plants in Nova Scotia, New Brunswick, and Newfoundland through their agents, the A. R. Williams Machinery Company, St. John, and they are advised that every machine is giving good satisfaction. This machine is hand-fed; its wheels are 42 in. diameter, and it is adjustable to angles of 45 degrees to the left and 10 degrees to the right.

Another excellent machine turned out by this company is the No. 134 Preston Adjustable Bevel Ship Band-saw, with power feed at a rate of from 57 feet to 90 feet per minute; 42 in. diameter wheels, and adjustable to angles of 45 degrees to the left and 10 degrees to the right. The company can also supply a number of other machines particularly adapted for wooden shipbuilding operations, and will be pleased to hear from any firms who are in need either of equipment or information in regard to their lines. Their sales agents are the A. R. Williams Machinery Company, St. John, Vancouver, and Toronto.

SIMONDS Circular SAWS

It is always to the advantage of mill owners and operators to use Simonds Solid Tooth and Inserted Tooth Saws, as well as Simonds Band Saws and Planer Knives. The Owner profits more by larger production, better lumber, and fewer delays. The Employee gains by working with safe and sure saws.

Write for catalog and prices

Simonds Canada Saw Co., Limited

Factory
St. Remi Street and Acorn Ave.

VANCOUVER, B.C. **MONTREAL, QUE.** **ST. JOHN, N.B.**

Patented Canada, May 29th, 1917. Patented U.S.A., October 25th, 1916.

The National Boiler Seam Protector

ABSOLUTELY PROTECTS Your Boiler From MUD CRACKS, FIRE CRACKS, BLISTERS, LEAKS, thereby eliminating your Repair Account on Stationary, Marine and Locomotive Boilers.

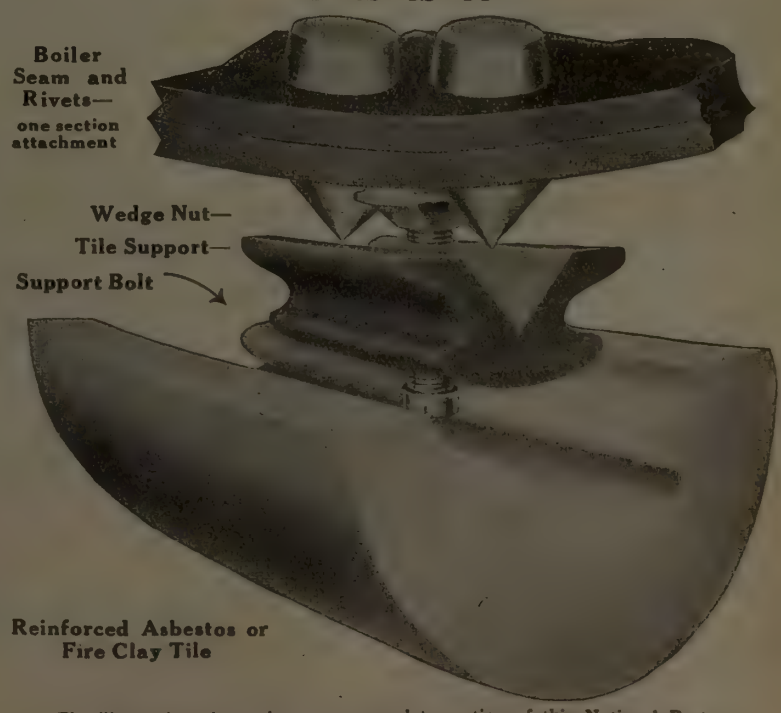
A few satisfied large users of this Protector in U.S.A. and Canada to whom we invite you to write

Mima Valley Hospital, Dayton, Ohio.
Mersman Bros. Brandt Co., Celina, Ohio.
Nicholas File Company, Anderson, Ohio.
New Idea Spreader Co., Coldwater, Ohio.
Olt Brewing Company, Dayton, Ohio.
Planters Manufacturing Co., Clarksdale, Miss.
Palmetto Phosphate Co., Tiger Bay, Florida.
Progress Laundry Co., Indianapolis, Ind.
STANDARD OIL CO., Shelby Hook, N.J.
Shelby Oil Mill Company, Shelby, Miss.
Sloss Scheffield Steel & Iron Co., Birmingham, Alabama.
Srere Pulp & Paper Co., Franklin, Ohio.
Troy Pearl Laundry Co., Dayton, Ohio.
United Paper Board Co., Rockport, Ohio.
Weidman Silk Dyeing Co., Paterson, N.J.
Wagner Manufacturing Co., Sidney, Ohio.
Wood Worsted Mills, Boston, Ohio.
Imperial Drop Forge Co., Indianapolis, Ind.
Illinois Glass Company, Alton, Ill.
Innis Pearce Company, Rushville, Ind.
Knab Brothers Company, Norwood, Ohio.
Lower Vein Coal Co., Terre Haute, Ind.
Lufkin Land & Lumber Co., Lufkin, Tex. ...
Mead Pulp & Paper Co., Dayton, Ohio.
Manville Company, Providence, R.I.
Meadow Lands & Coal Co., Arella, Pa.
Hamilton Ice & Cold Storage Co., Hamilton, Ohio.
Harding Division,
American Writing Paper Co., Franklin, Ohio.
Hamilton Foundry & Machine Company, Hamilton, Ohio.
Hartford City Paper Co., Hartford City, Ind.
Hamilton Otto Coke Co., Hamilton, Ohio.
Inland Coal & Mining Co., Indianapolis, Ind.
Indiana Ice & Dairy Company, Anderson, Ind.
U. S. A. Government.
American File Renewing Co., Anderson, Ind.
Boss Washing Machine Co., Norwood, Ohio.
Borden's Condensed Milk Co., New York City, N.Y.
Born & Company, La Fayette, Indiana.
Canton Stamping & Enameling Co., Canton, Ohio.
CARNEGIE STEEL CO., Pittsburgh, Pa.
Crystal Paper Company, Middletown, Ohio.
Chickasaw Milling Company, Chickasaw, Ohio.
Dayton Lumber Company, Dayton, Ohio.
Ducktown Sulphur, Copper & Iron Co., Isabella, Tenn.
Estate Stove Company, Hamilton, Ohio.
Economy Soap Products Co., Dayton, Ohio.
Frost-Johnson Lumber Co., Campi, La.
Montreal Cotton Mills, Ltd., Valleyfield, P.Q.
Gondert & Leineish, Dayton, Ohio.
Gem City Boiler Company, Dayton, Ohio.
Gulf City Gas Company, Biloxi, Miss.
Howard Smith Paper Mills, Beauharnois, Que.
Dominion Copper Products Co., Montreal, National Bridge Co., Longue Point, Que., Montreal Locomotive Works, Montreal, P.Q., and hundreds of other firms who realize the advantage and benefit derived by having this Protector.

Now it is up to you. Is not Protection and Prevention better than Risk.

Send for Catalogue and Price List to

THIS IS IT



The illustration above shows one complete section of this National Protector. Five such sections make the National Boiler Girth Seam Protector.

National Boiler Protector Co., of Canada

Head Office: 910 New Birks Building, MONTREAL
Factory: 322 Craig St. W.

BABBITT METALS

By W. G. Harris, President
The Canada Metal Co., Toronto

W. G. Harris
President The Canada Metal Co.

The real serviceable value of a babbitt does not necessarily bear any relation to the intrinsic or commercial value of the elements from which it is made.

To illustrate this fact: Add 5 per cent. of gold to any of the high-grade babbitts and it will make them cost about fifty times as much, but it is quite evident that it will not make them wear fifty times as long.

The real serviceable value of all babbitt metals is directly proportioned to their registration in the physical properties which cover the conditions they are required to meet in service; and the value of all those physical properties increases in all metallic mixtures of perfect chemical affinity, and decreases as they recede from that condition in the mixture.

Therefore, it is self-evident that to add any element to a metallic mixture in excess of the amount required to produce a perfect chemism would operate as a double loss. It would add to the cost of the mixture and operate to disturb its molecular tension, which would injure the quality of all its physical properties and reduce its value as a babbitt metal. For this reason the most economical and satisfactory service is secured through the aid of an expert metallurgist who, knowing the physical properties required in the babbitt, goes to work in a scientific manner to produce a chemically united alloy at the least possible expense which will possess the required physical properties.

Invention and discovery in the line of metallurgical processes have within the last few years made some of the formerly rare elements available for use in this line of work, which enables closer chemical affinities to be established between the elements of metallic mixtures; and the expert metallurgist of the present age can design metallic alloys to meet special physical conditions with the same dependable accuracy that the expert mechanic designs special machinery.

A bearing metal has one definite service requirement—that is, to take care of the vital parts of machinery (the bearings). This cannot be accomplished with metal that is too hard or too soft. One increases friction, heat, and wear, while the other may not stand the load weight or speeds, but mash or squeeze or disintegrate. The mechanical problem is the simple solution of what is the limit of load weight to which the bearings of any machinery may be carried. That limit every intelligent mechanic knows cannot exceed 2,500 pounds load weight to the equare inch of bearing metal without disastrous results to the machinery, by either stalling the machine, destroying the bearings, breaking the belts, or wrecking the weaker parts of the machinery.

Investigation will prove that 75 per cent. of the machinery in operation does not carry as much as 1,500 pounds load weight to the square inch of metal in the bearings.

Physical Properties of Babbitt

The properties of a babbitt metal which determines its real serviceable value are as follows:

First.—Tensile strength, the index to a babbitt's wearing quality. That is, the greater the force required to overcome the molecular tension of a metal, or a straight pull, the greater will be the wearing force or friction required to overcome molecular tension at its wearing surface.

Second.—Resistance to crushing strain; the index to a babbitt's carrying capacity.

Third.—Elastic tension, the index to a babbitt's ability to resist vibration or pounding.

Fourth.—Resistance to heat; the index to melting point.

Fifth.—Anti-friction quality; the index to the degree of angle at which the factor of friction is overcome by the force of gravitation.

Regardless of their constituent elements, babbitts which register alike in the above physical properties will give like results under like conditions of service.

To obtain results from babbitt metals such as will enable one to guarantee efficiency there must be extreme care taken, and the methods adopted at the Canada Metal Company's plant are at once interesting, particularly from the fact that a uniform alloy is absolutely assured.

First, the metals to be used are tested for purity by a metallurgical chemist, and, when everything is found satisfactory, the melting process begins, and when each particular grade is being made, no less than thirty-five tons is made at once. In fact, there are three of these monster pots operating daily.

During the melting many tests are made to ensure a perfect chemical affinity of the mixture. After being poured and before being passed into stock it is again tested for hardness by the Brinell method and on a friction testing machine, and the babbitt must stand up to all tests or it is discarded.

My experience has been gained during the last thirty years by studying all requirements, and whenever a difficult problem arose it was a pleasure to try and overcome same. Each problem was a step up the ladder of experience.

As babbitt metals by the Canada Metal Company are all made under such scientific principles, a word as to how to obtain best results may be added as a guide to the machinists.

Pour the babbitt metal at as low a temperature as is consistent with the filling of the moulds.

Red hot metal is overheated and has a tendency to form a dense grain. Avoid red hot metal.

Stir well before pouring.

Keep metal pure and separate from others for best results.

Our babbitt metals may be poured indefinitely. They will not deteriorate.

When pouring, strike in the centre, hitting lightly, and work to the outside.

In pouring have riser and pour down on the shaft.

Do not tighten upper half of box hard until bearing is settled.

Heating the shell to from 100 degrees to 150 degrees C. before the babbitt is poured into it tends to prevent blow-holes and similar defects, and also prevents the lining from shrinking away from the shell.

Babbitt bearings must not be jarred while the metal is solidifying, since any disturbance at this temperature tends to enlargement of the crystals and corresponding brittleness.

Almost a month ahead of schedule, the first hull for Uncle Sam's wooden fleet of commerce carriers has been rushed to completion for launching at an Atlantic shipyard, and is now afloat. Through the co-operation of the lumber industry, the Emergency Fleet Corporation's whole program is being speeded up. Within a short time, it is said, a ship a day will be put in the water for Uncle Sam at yards along the Atlantic and Gulf, in addition to almost as many wooden vessels being built for private interests. The Pacific Coast will also contribute about 200 standard type wooden steamers.

View of corner of the laboratory—The Canada Metal Co.

THE BRITISH COLUMBIA MILLS TIMBER & TRADING COMPANY

Head Office:
VANCOUVER, B. C.

(Established 1865)
MANUFACTURERS

BRANCHES
Hastings Saw Mill, VANCOUVER, B.C
Moodyville Saw Mill, BURRARD INLET

VESSELS LOADING AT HASTINGS SAW MILL, VANCOUVER, B.C

Rough and Dressed Fir,
Cedar, Spruce and
Hemlock

LUMBER

Lath, Pickets, Mouldings
and Shingles

Spars and Shipbuilding Timbers a Specialty

The Product of the

Hastings Saw Mill

has been unsurpassed for over Fifty Years in Foreign and Domestic Markets.

VESSELS LOADING AT HASTINGS SAW MILL, VANCOUVER, B.C.

Our cargo business for the year 1916 included shipments to the following countries:—Great Britain and Europe, Australia, New Zealand, Suvi-Fiji, South Africa, China, Japan, Peru.

AGENTS AND CORRESPONDENTS IN THE PRINCIPAL TIMBER MARKETS OF THE WORLD

Our Grade and Manufacture Unsurpassed

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) $2.10 per inch, each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Wanted

Large size Elm Logs wanted. Address P. O. Box 5, Papineauville, Que. 21-2

Wanted

4 cars Sawdust, 3 cars Spiles, 5 cars Hemlock or Cedar Ties, 2 cars Cull Basswood, 6 cars Cordwood, a number of cars Hardwood or Softwood Slabs. Apply Box 637, Canada Lumberman, Toronto, Ont. 20-23

Wanted—Lumber

Slabs and Edgings—Hardwood and softwood; five to five hundred cars, for cash. Box No. 641, Canada Lumberman, Toronto. 21-24

For Sale-Lumber

FOR SALE—Ten cars Heavy White Oak Ship Timbers for immediate delivery. Apply

Georgian Bay Shipbuilding Co.,
22-1 Midland, Ont.

For Sale

Several thousand feet one inch crating lumber, elm and soft maple, also several cars mixed cord wood.

For particulars apply Box 645, Canada Lumberman & Woodworker, Toronto, Ont. 22-22

For Sale

At Waubaushene, Ont.

3 cars 1 x 6 Mill Run White Pine,
3 " 1 x 8 Mill Run White Pine.
4 " 1 x 10 Mill Run White Pine.
1 " 5/4 x 4-5 and 6 Mill Run White Pine.
2 " 5/4 x 8 Mill Run White Pine.
1 " 5/4 x 10 Mill Run White Pine.
½ " 5/4 x 12 Mill Run White Pine.
½ " 5/4 Good Shorts.
½ " 6/4 Good Shorts.
½ " 8/4 Good Shorts.
2 " 8, 10 and 12 in. M. C., White Pine.
½ " 2 x 4 Mill Run, White Pine.
½ " 2 x 6 Mill Run, White Pine.
½ " 2 x 10 Mill Run, White Pine.
¼ " 5/4 & 6/4 Clear strips, White Pine.
2 " 4 ft. Mill Run Laths, White Pine.
3 " 4 ft. No. 3 Lath, White Pine.

At Joly, Que.

2 cars 2 x 10 Merchantable Hemlock, Dry.
1 " 1 x 9 Merchantable Hemlock, Dry.
4 " 1 x 10 Merchantable Hemlock, Dry.

F. McGIBBON & SONS,
Sarnia, Ont.
November 15th, 1917. 22-22

Lumber For Sale

300,000 ft. B.M. 1 x 4 and up Clear and No. 1 Spruce.
400,000 ft. B.M. 2 x 4 to 2 x 10 Spruce.
Piled widths and lengths separate.

GEO. C. GOODFELLOW,
c Montreal, Que.

For Sale-Machinery

FOR SALE—5/8 in., ¾ in., ⅞ in. diam. wire rope, in lengths from 50 to 200 ft., suitable for guying purposes or for making booms, 4c per foot net in any size or quantity.

H. W. PETRIE, LIMITED,
22-1 Toronto, Ont.

Slab Resaw For Sale

Heavy Horizontal Slab Resaw, Giddings and Lewis Make, 6 ft. wheels, 8 in. saws; used only four months.

FIRSTBROOK BROS. LTD.,
20-23 Toronto, Ont.

Box and Lumber Machinery For Sale, Second-Hand at Muscatine, Iowa

3—Dbl. Surfacers, 27 x 8, 30 x 12, 26 x 7, very fine condition.

Band Resaws

1—54-in. Gilbert, 1 60-in. Fischer, 1 72-in. Gilbert, 1 60-in. Fischer Db. Band Resaw.
1—No. 6 Chicago self feed rip-saw.
2—Morgan boxboard machines.
1—Fischer boxboard machine.
2—Morgan No. 8 lockcorner machines.
1—5 ft. knife grinder.
1—Morgan No. 1 setting up machine.
1—30-in. knife grinder.
Exhaust fans—1 60-in., 1 45-in., 1 40-in. All complete with piping.

Belting Shafting Pulleys Hangers.

Cleveland Belting & Machinery Co.,
21-22 Cleveland, Ohio.

For Sale—Cheap

One semi-portable saw mill, consisting of nearly new Jenckes Machine Company 40 H.P. firebox boiler with stack; 35 H.P. engine; three-saw edger; two saw trimmer; carriage, with set works, rope feed and track; sawdust conveyor; cut-off saw; shafting, pulleys, belting, etc.; two 56-in. Atkins saws used one season; automatic saw gummer; and some railroad iron and car. Located near Sault Ste. Marie, Ont. May be shipped by water or rail.

Write Herbert E. Stiles, 436 Ethel Street, Grand Rapids, Mich. 22-23

Planing Mill Machinery For Sale

Only in use for 18 months and almost as good as new.

1 Q. Y. Matcher, Gourlay.
1 Betting Saw, Gourlay.
1 Rip Saw, Gourlay.
1 Sticker, Ballantyne.
1 Scroll Saw, Ballantyne.
1 Surface Planer, Gourlay.
1 Heavy Band Resaw, Cowan.
1 Emery Grinder.
1 Large Fan, McEchran.
1 40 H.P. Westinghouse Electric Motor.
Saws, knives, dressing heads, etc., etc.

OTTAWA LUMBER COMPANY,
22 Metcalfe Street,
22-1 Ottawa, Ont.

For Sale

One 3-foll 52-in. Berlin Sanding Machine. Used only few weeks.

THE BEAVER BOARD CO.,
20-23 Buffalo, N.Y.

Machinery For Sale

1 Goldie & McCulloch Engine, 16 in. x 38 in. Complete with Heater, Pipes, Oil Pump, etc. In first-class condition.
1 Holmes Matcher.
1 Band Rip Saw.
1 Dynamo Engine, Jewel No. 3.

R. Laidlaw & Co., 65 Yonge Street, Toronto. 19-23

For Sale

No. 5 Double Bale, Geared Screw, Power Shaving Baling Press, manufactured by the P. K. Dederick Sons, Albany, N.Y.

Capacity two bales, about 30 in. x 16 in. x 16 in., weighing approximately ninety pounds each per stroke of machine.

This machine has been in use but five or six months and is in first class condition.

It will be sold at a bargain.

THE DE LAVAL CO., LTD.,
19-22 Peterborough, Ont.

Wanted-Machinery

WANTED—Two or three 50 in. to 54 in. solid tooth saws, 6 or 7 gauge, 2 in. mandril. Apply Box No. 646, Canada Lumberman, Toronto, Ont. 22-22

We are in the market for the following Second-hand equipment: Power plant for fifty foot, shoal draft tug boat; double engines preferred; one slab resaw; one double saw, automatic feed; tie mill. Address with full particulars and price,

Reamsbottom & Edwards,
22-1 Connaught Station, Ont.

Refuse Burner Wanted

Second-hand Refuse Burner in good condition, 12 to 15 feet in diameter, and moderate height. Address with full particulars and price.

REAMSBOTTOM & EDWARDS,
20-21-22 Connaught Station, Ontario.

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

YOUNG MAN, six years' experience as stenographer and bookkeeper in lumber business, desires change. Best of references. Box 629, Canada Lumberman, Toronto, Ont. 19-2

Position wanted by man of experience in both wholesale and retail lumber trade. Well acquainted also with the travelling end of the work. Available at once. Can furnish excellent recommendations. Apply Box 642, Canada Lumberman, Toronto, Ont. 22-1

Manager with best of references from present and past employers desires to make a change. Eleven years' experience in lumbering, estimating, milling, mapping, river work, purchasing and office duties. Technical education as engineer and forester. Box 647, Canada Lumberman, Toronto, Ont. 22-23

POSITION WANTED—As office manager or accountant with lumber and woodworking business; 15 years with one large Ontario concern; 5 years as treasurer and office manager. Practical knowledge in all departments of business; aggressive and up-to-date methods. Age 48; best credentials. At present engaged, but desire opportunity with large concern where advancement is assured as reward for ability and services. Apply Box No. 648, Canada Lumberman, Toronto, Ont. 22-23

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

WANTED—Bookkeeper for wholesale and retail lumber office. Apply Advertiser, P. O. Box 70, Sarnia, Ont. 22-22

WANTED—Man with knowledge of stenography and a little office experience, able to do invoicing and inventory work, to act as assistant to Superintendent of Sawmill. Good opening and year round employment to right party. Box 644, Canada Lumberman, Toronto, Ont. 22-23

Business Chances

For Sale

2,000 acres well timbered bush in township of Sinclair, new mill, stable and camps, Loading point, Huntsville. Reason for selling, ill-health. Apply to

HOLINSHEAD & ROGERS,
21-24 Huntsville, Ont.

AGENCIES WANTED—French engineer having large established clientele, desires direct agency for France of labor-saving machinery of all kinds for wood and iron working, as well as factory equipment. Headquarters in heart of Paris, near the Opera. Write E. A. B., Room 444, 14 Phillips Square, Montreal. 21-22

Saw Mill For Sale

Complete Sawmill with timber rights and freehold lands for sale. excellent shipping facilities. Mill situated County of Shefford, with a visible supply of soft wood and hardwood timber in the neighborhood for an extended life. Address P. O. Box 222, Waterloo, Quebec. 16-t.f.

For Sale

Timber Limits and Sawmill, estimated fifteen million feet of hardwood and ten million feet soft woods. Sawmill capacity 25 M. feet, shingle mill 125 M. Docks, tug, booms, logging outfit, houses, etc. Price $35,000.

The Manitoulin Lumber Co., Ltd.;
11-22 Walkerville, Ont

Sawmill For Sale

Saw, Shingle and Planing Mill in Bayfield, on Lake Huron, will be sold at a bargain. Practically new and cost over $6,000, and will be sacrificed for $4,500 on easy terms. Plenty of available timber for this mill which will make more money than the best 100 acre farm in Huron County.

This is a gold mine for the enterprising man with small capital. Apply to

JNO. B. MUSTARD,
19-22 Brucefield, Ont.

Mill Plant and Limits For Sale

43 Miles Limits on 31 Mile Lake, Gatineau Valley, containing Basswood, Spruce, Fir, Pine, Cedar, Birch, Maple and Pulpwood.

New Waterous 8 ft. Improved Double Cut Band Mill complete. Steam Alligator, Boats, Sleighs, Wagons, Harness, etc. For further particulars apply to

A. W. STEVENSON,
P. O. Box 2624,
8-t.f. Montreal, Que.

Tide-Water Stumpage For Sale or Exchange

For sale, or will exchange for good ranch or farm land, B. C. Tide-water stumpage, cruised and surveyed.

CARL BLOCK,
19-t.f. Peoria, Illinois.

For Sale

About five or six tons of 5/8 and 9/16 tested chain in lengths from 27 ft. to 30 ft. with ring on one end and hook on the other end. Address Drawer "F," Sarnia, Ont. 19-t.f.

Partner Wanted. Am desirous of getting in touch with a young experienced lumberman who has a general knowledge of the wholesale lumber business and the consuming trade in Toronto; must be capable of taking charge of business management. I am prepared to invest $20,000 to operate a business in Toronto and share profits, or would consider investing in a going lumber business in Toronto that is financially sound, and making money, which could be increased by additional capital. Correspondence strictly confidential. Box 649, Canada Lumberman, Toronto. 22-22

FOR SALE
as a Going Concern
Saw Mill and One Hundred Square Miles Crown Lands

Mill capable of sawing eight million superficial feet per year. New boilers, good engine and pumps, gang and rotary shingle and lath machines and planer. Railway siding in yard, also water shipping.

This property is situated in a thriving centre where labor is available. Good general store, boarding house and other buildings in connection with property. Good reasons given for selling.

No one need apply except bona fide purchasers.

Apply, Lumber, Box 643, Canada Lumberman and Woodworker, Toronto, Ont. 22-t.f.

Jobbers Wanted

We wish to let several contracts to take out logs on Berth No. 6, being broken front lying between the Magnetawan and French Rivers. This berth is all convenient to Canadian Northern Railway.

John Harrison & Sons Company, Limited,
Saw and Planing Mills,
9-t.f. Owen Sound, Ont.

FOR SALE
Lumber Mill, Lumber Licenses and Sawn Lumber

There will be sold at Public Auction, at the Court House, in Newcastle, New Brunswick, Canada, on the twenty-ninth day of November, instant, at twelve o'clock noon, a steam saw mill, situate at Bartibogue, on the Miramichi River, New Brunswick, equipped with band and re-saw, double edger, trimmer and lath machine, capacity about forty thousand feet daily. Also, fifty-five and a half square miles licensed lumber lands, under license from Government of New Brunswick. Also, right to cut all lumber, except spruce, on ten and a half miles similar licensed lands, all of which lands are situate upon or adjacent to Bartibogue River and its branches, which empties into Miramichi River near the Mill. Also, booming rights, booms and other equipment, all of which will be sold in one lot, so that it can be taken over as a going business, which properties are known as the James A. Rundle & Co., lumber property. Also, immediately after the above mentioned sale, there will also be sold at public auction, what remains (subject to previous sales) of this season's lumber cut, which consists of about 1,300,000 M. sawn lumber 2 x 3 to 2 x 10. Also about 1,000,000 M. 3 x 3 to 3 x 11. Also about 120,000 M boards. Also about 1,700,000 laths, all of said lumber will average about 60 per cent. princess pine, balance spruce.

For full particulars apply to Hon. J. P. Burchill, Nelson, N.B., or to Mr. Claud Brown, Chatham, N.B., or to the undersigned, at Bathurst, N.B.

Dated this first day of November, 1917.

GEORGE GILBERT,
22-22 Master, Supreme Court.

TENDERS
for Pulpwood Limit

Tenders will be received by the undersigned up to and including the seventeenth day of December next for the right to cut pulpwood and pine timber on a certain area situate in the vicinity of the Kapuskasing River in the Districts of Timiskaming and Algoma.

Tenderers are to offer a flat rate per cord for all classes of pulpwood, whether spruce or other woods. The successful tenderer shall be required to pay for the Red and White Pine on the limit a flat rate of $10 per thousand feet board measure.

The successful tenderer shall also be required to erect a mill or mills on or near the territory, and to manufacture the wood into pulp and paper in the Province of Ontario, in accordance with the terms and conditions of sale which can be had on application to the Department.

Parties making tender will be required to deposit with their tender a marked cheque payable to the Honourable the Treasurer of the Province of Ontario, for Twenty-five Thousand Dollars ($25,000.00), which amount will be forfeited in the event of their not entering into agreement to carry out conditions, etc. The said Twenty-five Thousand Dollars ($25,000.00) will be held by the Department until such time as the terms and conditions of the agreement to be entered into have been complied with and the said mills erected, equipped and in operation. The said sum may then be applied in such amounts and at such times as the Minister of Lands, Forests and Mines may direct in payment of accounts for dues or for any other obligation due the Crown until the whole sum has been applied.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

G. H. FERGUSON,
Minister of Lands, Forests and Mines.
Toronto, September 19th, 1917.

N.B.—No unauthorized publication of this notice will be paid for. 20-24

Tenders for Timber
on
Lower French River Reserve

Sealed tenders, addressed to the undersigned, and marked on the face of the envelope "Tender for Lower French Timber," will be received until noon of Wednesday, November 28 next, for the merchantable pine, hemlock and cedar timber on the Lower French River Reserve in the district of Parry Sound.

Tenderers should state the amount of cash bonus they are prepared to pay for the timber over and above crown dues payable under sworn returns furnished by a licensed culler. The tariff of dues is as follows:—

Pine, $2.50 per M.f.b.m. or $25 per M.cu.ft.

Hemlock, $1 per M.f.b.m. or $10 per M.cu.ft.

Cedar, $1.50 per M.f.b.m. or $15 per M.cu.ft.

The rate of dues on timber taken out in other form than saw-logs can be had on application.

An annual license will be granted to the successful tenderer and five years will be allowed for the removal of the timber under the Regulations of the Department. A copy of such Regulations can be secured from the undersigned.

An accepted cheque on any Canadian chartered bank for ten per cent. of the bonus tendered should accompany each tender, the balance of the bonus to be paid within thirty days from the date of notification of acceptance of tender.

Any further information that is desired can be obtained upon application to the undersigned or to Alex. Logan, Indian Superintendent at Parry Sound.

The unauthorized publication of this advertisement will not be paid for.

DUNCAN C. SCOTT,
Deputy Supt. General of Indian Affairs.
Department of Indian Affairs,
Ottawa, October 20, 1917. 21-22

Union Lumber Co.
Limited

White Pine
Red Pine
Spruce
Red and Jack Pine
Lath

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

—if you buy cheap, low-grade tea you are practicing false economy.

The advantages in favour of *good* tea are

Greater number of cups to the pound.
Real flavour.
Satisfaction instead of dissatisfaction.

"SALADA"
TEA

is the finest quality Ceylon and Indian Tea that will yield generously and prove more economical in the long run than any cheap, low-priced tea.

The sealed moisture proof packets facilitate storage, transportation and stock inspection.

Many Lumber Camps and Mines favour us with their patronage for these advantages.

In any case write to us for samples and prices.

SALADA TEA CO.
TORONTO

Review of Current Trade Conditions

Ontario

The lumber trade in Ontario is difficult to describe at present. A group of lumbermen who recently discussed the situation was unable to come to any agreement upon details, except that operations in the woods during the coming winter would be greatly curtailed. This is undoubtedly the case, and is largely the result of shortage of labor and increased cost of all kinds of supplies. Many of the large manufacturers who usually have made considerable headway with their logging operations by this time of year still report that they are very short handed, and do not know how much they will be able to take out during the winter.

Transportation problems are worrying the trade from one end of the province to the other, as they are throughout Canada generally. Canadian railways are refusing to permit their cars to go out of the country with lumber, and even in some cases will not allow them to be loaded for shipment on to other lines than their own. So anxious have they become about the shortage which is upon them that they are doing everything in their power to retain possession of their own cars. There seems to be no question that during the coming winter the car shortage will be extremely severe, and dealers who have not been able to obtain their supplies early will have a struggle to keep up even with the small amount of trade that they expect.

There is very little to say in regard to the price situation. Manufacturers and wholesalers seem to be pretty generally of one opinion, namely, that the present is no time in which to think of lower prices. Leaving out of consideration entirely the greatly increased cost of production which will have to be borne by next year's lumber output, the actual demand for lumber promises to continue on much the same level as that of to-day, which means that everything produced can be sold, and that there is no necessity for disposing of stocks at a loss.

A short time ago there was considerable talk of easier prices for hemlock. To-day the feeling in this regard seems to have passed entirely away, and hemlock manufacturers and wholesalers are of the opinion that prices will continue firm. Some manufacturers of white pine are talking of prices all the way from $5 to $10 higher for next year's output than the prices which have prevailed during the present year. Shingles had a slight easing off a few weeks ago, but apparently the drop in price was the result of a misunderstanding of the situation in British Columbia, as the price has stiffened again.

Eastern Canada

The car shortage is the most important feature of the lumber trade situation at Montreal and throughout the eastern provinces. The trouble is felt most severely by wholesalers who have United States connections. The pulp and paper companies also report that it is becoming more and more difficult to obtain cars. There is a strong demand for Canadian lumber in the United States, but it is not possible to deliver anything like the quantity that could be exported if cars were available. The shipbuilding industry is also handicapped for the same reason and construction of some vessels is being delayed. It is reported that the Imperial Munitions Board is ready to place orders for 1,000-ton wooden vessels at a straight contract price, and that they are in favor of using Eastern Canada timber for these vessels, rather than B. C. stocks. Preliminary negotiations along this line are under way. A recent report states that the Imperial Munitions Board has undertaken to place contracts in Canada for $50,000,000 worth of shells required in the United States. This will be a great benefit to the wooden shell box manufacturers.

The labor situation is continually growing worse. Lumber, and pulp and paper companies are earnestly discussing the possibility of securing exemption for a sufficient number of men to run their plants and to carry on operations in the woods. The export trade to the United Kingdom is very small. Total shipments from Montreal for the present year will show a large decrease as compared with last year.

Spruce manufacturers in the Eastern States report that they are able to dispose of their stocks without difficulty at firm prices. The demands from industrial sources and from the government have made up for the reduced volume of house-building. The car shortage in Canada is preventing much lumber from going across the line to United States markets. Spruce manufacturers in the Virginias and the Carolinas are also prevented by railroad embargoes from shipping extensively into Northern territory. Prices all remain very firm. Hemlock manufacturers report that the demand is not up to normal, and that stocks in first hands of retailers are away below normal. Hemlock prices show very little change, most sales being at the list, although some are 50c to $1 lower. Shingles and lath at Boston are very quiet on account of the absence of house-building.

United States

The yellow pine situation among the Southern manufacturers is dominated absolutely by the urgency of the demand for shipbuilding timbers. All other business is of secondary consideration, and further restrictions on the sale of yellow pine ship timbers have been imposed by the government. An embargo has been placed upon every stick thicker than 2 in., wider than 10 in., and longer than 20 ft., which can be used for a ship schedule. The demand for timbers from the railroads and other sources is also very keen, and many of these buyers will be obliged to turn to shortleaf. There will be a large amount of lumber available for house-building and other uses, as the production of ship timbers results in a fair proportion of lumber not suitable for the government work. An increase is reported in the demand for yard and shed stock in most sections. Both production and orders show a decrease, and shipments are about the same as during the past few weeks. Prices have shown some improvement. The government has also been purchasing extensive quantities of hardwoods for shipbuilding ,and it now looks as though the demand for this purpose will be increased greatly.

The Western pine markets are not very active. California and Southern Oregon mills are receiving more orders than Inland Empire mills. Sales of white pine in the extreme East are increasing. Thirty-four Inland Empire mills report for the week ending October 20 that they received orders amounting to 13,550,000 feet. Their shipments were 18,677,772 feet, and production was 22,829,793 feet. Prices continue firm. The redwood mills are having trouble getting sufficient cars to move their orders. The demand for redwood in the East, however, is not so brisk as it would be if deliveries could be made promptly. Redwood prices are firm.

The United States Government has practically taken the entire Douglas fir manufacturing business under its direction. The government has stopped export, even holding the departure of loaded vessels until the supply of ship and airplane lumber can be greatly increased. Every resource of the Douglas fir manufacturers is now being directed to the production of fir for ships and airplanes. Ordinary trade will be allowed to shift for itself in any way it can. The car situation is worse than it was.

Great Britain

In former years the middle of October has seen quite a number of contracts closed for the ensuing season's shipments of lumber and timber to Great Britain. This year nothing in the way of forward contracts has yet been reported. The whole situation has been greatly changed during the past twelve months. It is not thought probable that anything will be done in the way of forward buying for some time to come, as there is absolutely no basis for the calculation of future values.

At London the dock deliveries of softwoods show a considerable improvement as compared with a short time ago, but are much smaller than those of a year ago. The usual wood dock statistics, however, are misleading nowadays, as they do not show the full amount of imported softwoods going into consumption. Supplies are drawn from many other sources, including home-grown woods. Fairly large arrivals are reported, and improvement is shown in the quantity both of sawn and planed goods. Stocks of planed goods in London are still quite heavy, and compare favorably with those of other years. General trade at London is quiet, but industries of a war nature are fully employed and are using large quantities of all kinds of wood. Quite a number of new factories are being put up, which are making business for firms which formerly were engaged in turning out material for private buildings.

The trade at Liverpool shows practically no change of interest. The scarcity of spruce deals has prevented business of any importance for some time past, and importers are protesting strongly against the increased limitation of imports. It is generally felt that the time has come when some consideration must be shown to the timber trade, if it is not to be extinguished altogether. American hardwoods at Liverpool show no change. A few parcels have arrived of late, and have been sold at very high prices. The Manchester trade is much the same as that at Liverpool. Stocks are much reduced, and practically everything on hand is owned either by the government or special customers. There seems to be no prospect of new goods coming forward,

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

although there are plenty of enquiries, particularly for softwoods. Arrivals of spruce and pitch pine are limited solely to what is required for government contracts.

The trade at Glosgow continues dull, being greatly restricted by the import regulations. Recent small imports of spruce from Montreal—some 100 standards altogether—were quickly bought up, the price being considered as of little importance, compared with the actual securing of the goods. Other imports are confined to occasional small shipments of clear spruce and American furniture woods. A few sales of birch plank are reported, but in most cases they are resales back from one merchant to another. Deliveries from Glasgow docks are on the smallest possible scale.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Ottawa Market Reports—More Shell Box Orders

Ottawa, Nov. 6.—(Special correspondence to the Canada Lumberman.)—The last two weeks have seen practically no change in the Ottawa lumber market. The tendency toward firmness continues. There has been no change in prices, and the market is not overstocked. Some dealers are of the opinion that stocks are low. Work on the shell box contracts let in October is proceeding satisfactorily.

The transportation and labor problems continue to grow more troublesome. It is authoritatively estimated by the trade that between twelve and fifteen million feet of lumber on order is tied up at Ottawa owing to cars not being available. The woods operations of the mills are more or less unsettled. Camps are being established, but, on account of the shortage of labor, they are not being fully manned. Mill labor with the manufacturing plants is also running short.

The Canada Lumberman is authoritatively informed that further new tenders for shell boxes have recently been issued by the Imperial Munitions Board. All the shell box manufacturing plants on the list of the Imperial Munitions Board have been asked to figure on the new tenders. The Imperial Munitions Board stated to the Canada Lumberman that it does not expect the returns to be in or completed before the end of this month. The call for new tenders indicates that it is the intention to continue the manufacture of shell boxes in Canada. The tenders called are for 6 in. and 4.5 boxes.

The demand for lumber for building purposes has fallen off. The demand for mill refuse for fuel continues.

There appears to be little hope in sight for improvement in the car situation, although the recent appointment of a committee of Canadian railway heads at Montreal is expected by the trade to help the situation to some extent. This committee will probably visit Washington in the near future, to make representations for the return of Canadian box cars now on American rails. Mr. Frank Hawkins, secretary of the Canadian Lumbermen's Association, reports that the car situation at Ottawa is no worse than in other parts of the country.

Mr. Jackson C. Booth reports that the John R. Booth sawmill at the Chaudiere will be completely closed before November 15. The cut this year was not so large as last year. Mr. Booth could not estimate this season's cut. For some time past the mill has only been running during the day. Mr. Booth says he does not believe there is a lumber manufacturer in Canada making money to-day. The decrease in domestic consumption, restrictions placed on the export trade, and the increased cost of labor and supplies are proving costly to the lumbering industry. The 1917-18 woods cut of this mill is still unestimated. The woods labor situation remains unsettled. About two hundred men are affected by the closing of the sawmill.

The McAuliffe-Davis Lumber Company is making satisfactory progress on its shell box contract, the contract for which is for twenty thousand boxes. This contract is expected to be completed about the latter part of this month. Enquiries and demand for building and other grades of lumber are reported to be slow.

Gilmour & Co., lumber brokers, report that prices are likely to stiffen during the coming months, and that before spring an increase of $5 per M. will occur on all grades of lumber used for building purposes and shell box work. Available stocks, they say, are low.

The early part of November brought about little change with the W. C. Edwards Company. Orders are continuing fairly well. In local or domestic trade there has been no change. The company is still engaged in completing an old shell box order. The woods labor situation since the last report has not improved. Mr. S. C. Thompson, manager of the company, reports that the car situation is the worst the company has ever experienced. It has ten million feet in orders tied up.

The Hawkesbury Lumber Company reports that the woods labor situation has not improved. Its camps are established, but are not filled.

The Estate James Davidson is having difficulty in securing labor for both its mill and woods operations. It has a large shell box contract under way. The price offered for mill labor for shell box work is $2.50 per day. The first order for doors that this plant has received for many months came in Monday, November 5. It was a carload order from the Maritime Provinces. This plant reports a decrease in the demand for building materials.

St. John Markets—Uncertainty Prevails

St. John, N.B., Nov. 7—(Special to the Canada Lumberman).—The same feeling of uncertainty prevails in the market at St. John as elsewhere; no one is able to pierce the gloom and tell what the future may bring forth. As far as the business of cutting logs is concerned one has no trouble to look into the future and at least guess what the cost of the log will be. As the season advances men are becoming more scarce, and wages are gradually advancing. Instead of being a question of how much you will pay woodsmen a month the problem now is where to find them.

The St. John River being a boundary river, a good many operators having mills in New Brunswick cut their logs in Maine, and the United States and Dominion officials in the immigration departments are very careful to see that no men are going into the woods who are fit for service abroad; also, the laws are very costly for getting Canadians into United States lumber camps. Unless more men are found to man the camps there will certainly be at least a 25 per cent. shortage of logs on this river, and perhaps more. Besides this what logs are cut will cost at least one-third more when brought to market and sawn up.

The market for English deals is certainly flat. No offers are being made by the large buyers on this side of the water. They all claim that as they cannot forward the stock by boat it is useless to buy. If they do not come forward at once with a good offer for deals it is certain that the operator is not going to cut as many logs or make as great an effort to get them as if he were assured of a ready sale for his product.

It is said that a sale of over 50,000,000 feet has been put through on the North Shore of New Brunswick at or around $25 per thousand feet for deals sawn this summer, for the usual specification. While this is slightly better than prices of a year ago, it will not leave any profit whatever if deals for next year (1918) are to be sold at this price, as no one can tell at the moment the cost of the raw material. All log jobbers on the River St. John are going into the woods to get the logs as cheap as possible, but the buyer to pay the costs plus a commission for the log operators' winter's work.

Prices in the American market, while good, are not showing the same steadiness as two months ago. Very little house building is being done, and it does not look as if there will be much. The work calling for large dimension sizes is for framing shell and aeroplane factories and cantonments for the housing of United States troops. What next year may show for American prices is impossible to tell and it would only be a guess if one should make a price. At the present moment ordinary random is selling, f.o.b. St. John, 2 x 4, $24; 2 x 6, $25.50; 2 x 7, $26.50; 2 x 8, $27.50 to $28; 2 x 10, $29 to $30.

Merchantable boards are impossible to find, price is no object, $25 to $26 being paid, on cars at St. John for green spruce 1 x 3-4-5 and 6 ft. boards. Laths are a dead letter as far as American shipments are concerned. Locally $4 is being paid by the carpenters. The same conditions apply to cedar shingles, but shingles are scarce at St. John and are bringing higher prices than ever before for local work. Extras $4.70, Clears $4.30, 2nd Clears $3.35, Ex. No. 1 $2.20.

Locally no house building is being done and the factories are looking forward to a very slack winter, unless something unforseen arises. Only two mills are yet running at St. John. The winter port is now about to open and will call for many men. This will hamper the operation of the mills and cause them to close up about same time as a year ago, viz., about December 1.

Shipbuilding is going along very slowly, the work being held up by the non arrival of the big sizes of British Columbia fir and also for want of the larger sizes of birch from the local farmers, who do not care to get it at any price.

KLIM
SPELL IT BACKWARD
PURE SEPARATED MILK
IN POWDER FORM
FOR ALL COOKING
WHERE MILK IS NEEDED

PURE
ECONOMICAL
WHOLESOME

KLIM
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PURE SEPARATED MILK
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FOR ALL COOKING
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The Best Milk for Your Camp

Klim is all the food value—and nothing else—of pure separated pasteurized milk in powder form. In buying Klim you are paying only for food values because all of the water which adds bulk and weight only has been removed. Klim can be mixed dry with other dry ingredients in cooking or can be dissolved in water and used as liquid. Klim is 100 per cent. body-building food value—the greatest amount at the least cost of any food you can buy.

Order from your Wholesale Grocer or Supply House.

CANADIAN MILK PRODUCTS LIMITED

10 and 12 William Street, TORONTO

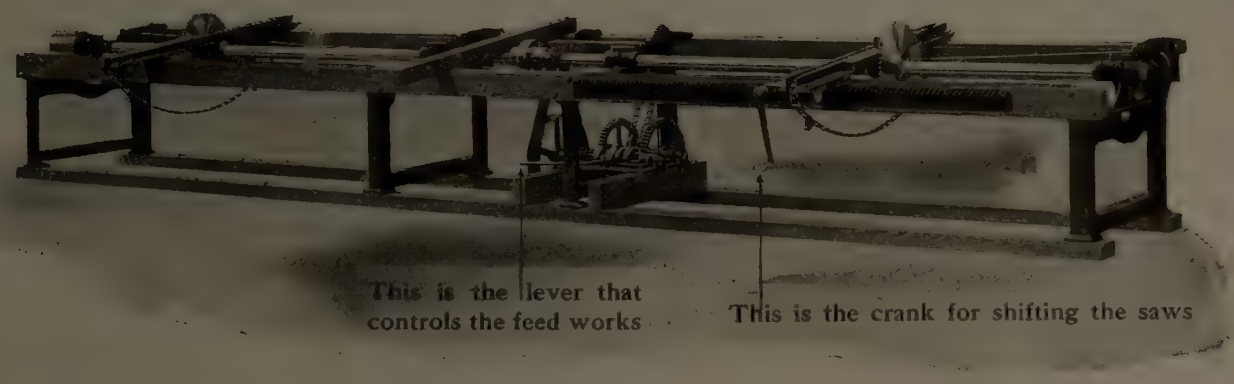
Quebec Office: Montreal, P.Q.
W. H. Escott Co., Limited, Winnipeg, Man. Calgary, Edmonton, Saskatoon, Regina.
Kirkland & Rose, Vancouver, B.C.

Plants: Brownsville, Ont.; Burford, Ont.; Belmont, Ont.; Hickson, Ont.

Increase Your Cut, Make your Lumber Sell More Readily, Get More for it per M and Save Freight by installing a

Tower One-Man 2-Saw Trimmer

which squares the ends, cuts the boards to standard or any desired special lengths, and saves freight by removing the waste and, therefore, reducing the weight.



Both saws shift, moving to or from each other at an equal rate.

Two feeds—fast and slow.

The feed can be changed or stopped altogether without stopping the saws.

Made in eighteen different sizes and styles.

HUNDREDS IN USE.

GORDON HOLLOW BLAST GRATE CO., GREENVILLE, MICHIGAN

Manufacturers of

The Gordon Hollow Blast Grate and the TOWER Line of Edgers and Trimmers.

THE EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS DIEU RIEN
MONTREAL, Canada
Head Office at Montreal.

SPRUCE
ROUGH or DRESSED

Saw Mills at
MONT LAURIER, QUE.
STE. MARGUERITE, QUE.

Dressing Mills at
ST. JEROME, QUE.

Northern Office:
MIDLAND, ONT.

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HATTIESBURG, MISS.

Herman H. Hettler Lumber Co.
2601 Elston Ave., CHICAGO, ILL.
Manufacturers and Dealers
White Pine, Red Pine and Yellow Pine,
Lumber and Lath
Excellent Planing Mill Facilities. Prompt Shipments.

Everything in Spruce
Dressed and in the Rough
Campbell, MacLaurin Lumber Co.
Limited
Board of Trade Building, MONTREAL

SPRUCE AND **BIRCH**
GOOD STOCKS PROMPT SHIPMENTS SATISFACTION
C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber, Lath and Shingles
Offices—McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

John Watson, lumberman, intends to install new machinery in his plant at Fergus, Ont.

W. Williamson, Toronto, Ont., is erecting a frame planing mill at 601 Woodbine Ave., to cost $3,500.

John A. McIntyre, Rodney, Ont., will probably commence rebuilding his planing mill, which was recently destroyed by fire, in the spring.

One of the main buildings of the Provincial Paper Mills at Georgetown, Ont., was recently destroyed by fire. The loss is estimated at $25,000, and is covered by insurance.

The Kinleith Paper Company, Welland Canal, St. Catharines, Ont., was recently destroyed by fire. The buildings were only partially destroyed and were covered by insurance.

The Eagle Lake Lumber Company, Limited, has been incorporated, with head office at South River, Ont., and capital stock of $40,000, to carry on business as general lumbermen. The provisional directors are S. R. Anderson, H. Mawson and W. C. Shreiner.

The Mingo Pulp, Paper and Land Company, Limited, has been incorporated, with head office at Toronto, and capital stock of $1,000,000. The solicitors for the company are Day, Ferguson & McDonald, Tanner-Gates Bldg., Toronto. Correspondence addressed to the company, care of the solicitors, will be forwarded.

The Canadian Allis-Chalmers Company, Limited, King and Simcoe Streets, Toronto, Ont., are repairing their shipyard at Bridgeburg, Ont. They have also started to put the old shipbuilding yards at Millers Bay into shape for building 3,000-ton steel ships. Four vessels are to be built. The superintendent of the plant is J. J. Scollan.

The Canadian Tie & Lumber Company, Limited, has been incorporated, with head office at Toronto, Ont., and capital stock of $150,000, to carry on a general tie, timber and lumber business, including the logging, sawing, manufacturing, shipping, buying and selling of lumber, wood, timber, pulp, etc. Among those interested are W. A. J. Case, J. B. Taylor and M. Smith, all of Toronto.

The Peterboro Lumber Co., Ltd., Peterboro, Ont., report that their recent loss by fire was partially covered by insurance, which has been satisfactorily adjusted. The company have already commenced rebuilding. The new plant will be larger than the old one and it is expected that it will be completed by December 1st. The fire happened at an extremely busy time when the company was running its mill night and day, but they report that arrangements were promptly made for another mill to take care of its unfilled orders and also to handle new ones.

Eastern Canada

F. E. Lovell, Lumberman, Coaticook, P.Q., has been registered.

Capt. Howard Corkum, Mahone, N.S., is having a large tern schooner built at Mahone.

The Canada Steamship Lines, Limited, 9 Victoria Square, Montreal, P.Q., are erecting two buildings at Cap de la Madeleine, P.Q., at a cost of $100,000.

The Industrial Bureau of Canada, Limited, has been incorporated, with capital stock of $49,000, and head office at Montreal, P.Q., to carry on business as manufacturers of lumber, timber, logs, pulpwood, etc.

Fire recently destroyed the lumber plant belonging to John E. Moore & Company, Limited, 71 Dock Street, St. John, N.B. The manufacturing plant was totally destroyed. The loss is estimated at $100,000.

Mr. James Buchanan, trading as the James Buchanan Lumber Company, has commenced business as a wholesale lumber dealer at 233 Coristine Building, Montreal. He will specialize on mahogany and veneers.

The Davidson Lumber Company, La Have Street, Bridgewater, N.S., are contemplating the erection of a new general office building. At present the company are negotiating for the purchase of the property. The building will be of concrete construction.

With a capital of $25,000, the Stoneham Woodlands Corporation, Limited, has been formed to carry on business in lumber, timber, pulpwood, and paper, both buying, selling and manufacturing; to purchase timber limits, operate sawmills, and own and maintain poles and transmission lines for the distribution of electric power in a limited district. The head office is in Quebec City.

The Montreal Shipbuilders Ltd., has been incorporated, with head office at Montreal, and capital stock of $300,000, to purchase, contract for, build, etc., steamships, sailing vessels and other vessels of all kinds. Among those interested are E. M. Mcdougall, S. C. Demers and L. G. Bell, all of the city of Montreal.

William Rutherford and Sons Company, Limited, Montreal, have obtained the contract for the millwork and lumber for the hospital to be erected at St.

Anne de Bellevue, P.Q., for the Military Hospitals Commission. The contract is an exceptionally large one, the series of buildings being mainly of frame construction. The general contractors are E. G. M. Cape & Company, Limited, Montreal.

Work on a new industry that promises to become one of the most important on the Miramichi River, was started at Nordin, N.B., early this month, when workmen commenced remodelling the mill formerly owned by the Rosebank Lumber Company and installing machinery for the International Shipbuilding Corporation. The intention of the company is, at first, to erect wooden ships, for which there is at the present a great demand, and it is expected that the keel of the first one will be laid in a very short time. This industry will have its head office at Newcastle, N.B., and will employ many skilled and unskilled men. The site selected for the works is an ideal one, about two miles below Newcastle. The mill, which is one of the best on the Miramichi will be utilized to provide lumber both for finishing and rough work. J. Ander, of Newcastle, and F. H. McNaught, of Chatham, N.B., are among the promoters of the new company.

Western Canada

The North-West Lumber Company, Limited, Edmonton, Alta., has increased its capital stock from $500,000 to $1,000,000.

The Burnt Mountain Lumber Company, Limited, has been incorporated, with head office at Edmonton, Alta., and capital stock of $18,000.

The Atlas Lumber Company recently lost their warehouse and lumber yards at Lougheed, Alta., by fire. The loss is estimated at $15,000.

The sash and door factory belonging to the Cranbrook Sash and Door Company, Limited, Cranbrook, B.C., was recently destroyed by fire. The loss is estimated at $40,000.

The Adanac Lumber Company, Limited, has been incorporated, with head office at Vancouver, B. C., and capital stock of $10,000, to carry on business as foresters, loggers, timber merchants, shingle mill, planing mill and sawmill proprietors, etc.

The Premier Lumber Company, Limited, has been incorporated, with head office at Vancouver, B.C., and capital stock of $10,000, to carry on business as manufacturers of and dealers in lumber and shingles, shingle-mill and sawmill owners, loggers and lumber and shingle merchants.

Sealed tenders are being received by the Minister of Lands for B. C. until the 4th day of December 4th, 1917, for the purchase of License X1138, to cut 1,270,000 feet of cedar poles, hemlock, white pine and spruce, and 30,000 lineal feet of cedar poles on an area adjoining Lot 3213, Robertson Creek, Kootenay District. Two years will be allowed for the removal of the timber. Further particulars may be received from the Chief Forester, Victoria, B.C.

Quebec Culler's Report

The following comparative statement of timber, measured and culled to date, is furnished by the Quebec Supervisor of Cullers' Office, under date of November 6:

	1915. Cubic feet.	1916. Cubic feet.	1917. Cubic feet.
Waney white pine	399,280	143,400	91,440
Oak	110,120	336,240	115,680
Elm	46,840	72.160	117,360
Ash	840	1,680	320
Butternut	.....	40	.....
Birch and maple	48,880	46,880	15,880
Pitch pine	.....	.....	41,230
Fir	.....	.....	36,490

Death of William Williamson of Montreal

After an illness of five weeks, Mr. William Williamson, president of the Laurentian Lumber Company, Montreal, died in the Royal Victoria Hospital, on November 1, aged 61. Mr. Williamson was injured in a railway accident at Piedmont, P.Q., on February 5 last, sustaining a fracture of the skull, besides other injuries. He never wholly recovered from the effects of the accident. After being in business as a general merchant at Point Fortune, P.Q., Mr. Williamson started as a wholesale lumber merchant at the same place. Later he formed a partnership with the late Mr. Duncan Morrison, under the style of Williamson & Morrison, with mills at L'Orignal, Ont., and with offices in Montreal. Seventeen years ago the Laurentian Lumber Company, Limited, was formed, and on the death of Mr. Morrison, Mr. Williamson devoted his attention to this company, of which he was the president from the commencement. The company at one time owned mills at Montford and other points, but lately the manufacturing branch was given up. Mr. Williamson was formerly connected with the Argenteuil Rangers, now the Duke of York Hussars, in which he held a captaincy. The interment took place at Point Fortune on November 5.

WHOLESALE LUMBER

Dry Spruce - 1916 Sawing

2 in. Scant. x 6 in., 10 ft. and up Merchantable Spruce,	100 M
2 in. Scant x 7 in., 10 ft. and up Merchantable Spruce,	55 M
2 in. Scant x 8 in., 10 ft. and up Merchantable Spruce,	35 M
2 in. Scant x 4 in. and up, 3/9 ft. Cull Spruce	26 M
2 in. Scant x 4 in. and up, 10 ft. and up Cull Spruce	18 M
2½ x 4/8 in., 10 ft. and up Cull Spruce	100 M
2½ x 9 in. and up, 10 ft. and up Cull Spruce	100 M
3 x 4 in. and up, 3/9 ft. Cull Spruce	100 M
1 x 4 in., 10 ft. and up Merchantable Spruce	300 M
1 x 5 in., 10 ft. and up Merchantable Spruce	130 M
1 x 7 in., 10 ft. and up Merchantable Spruce	35 M
1 x 4 in., 6/16 ft. Merchantable Spruce	50 M
2 in. Scant x 6 in., 6/16 ft. Merchantable Spruce	70 M
2 in. Scant x 5 in., 6/16 ft. Merchantable Spruce	70 M

THE McLENNAN LUMBER CO., LIMITED
MONTREAL, QUE.

The Bennett Lumber Co.
Limited
Solicit your kind enquiries for
Spruce, Pine and Birch
in all grades and thicknesses
American Hardwoods and Mahogany
11 St. Sacrament St., - MONTREAL, P.Q.
Long Distance Phone Main 812

H. BOURGOUIN
Dominion Express Bldg., 145 St. James St., Montreal
WHOLESALE LUMBER AND TIMBER
Dressed and Rough
White and Red Pine, Spruce, Hemlock, Banksian Pine, Birch, Maple, Dimension Cedar, B. C. Fir, Yellow Pine, Railway Ties, Fence Posts, etc.
Prompt shipment. Satisfactory stock. Good service Write for Prices.
A. F. B. AUSTIN, Manager

BUY A VICTORY BOND
AND BOOST
YOUR OWN BUSINESS

Ship Construction in the U. S.

1,036 Vessels Under Way with Total Tonnage of 5,924,700 Tons

The Emergency Fleet Corporation of the United States has discontinued the publication of information regarding the production of vessels. A statement issued by the corporation on September 26, however, contains some interesting information.

During the past two months, the statement says, the Emergency Fleet Corporation has awarded contracts for 118 wooden vessels of 3,500 tons dead-weight capacity, each to 27 different shipyards.

There had previously been awarded contracts for 235 wooden vessels of similar type to the above, and for 58 vessels of composite construction, thereby making a total award to date of 411 wooden and composite vessels, of an aggregate dead-weight tonnage of 1,460,900.

During the past two months the designs for machinery have been completed for the manufacture of engines, boilers, and other articles of equipment for these vessels, for which the facilities available of machine shops and boiler works throughout the country have been used. Specifications have been prepared and negotiations outlined and initiated for the assembly and installation of machinery in wooden vessels, the most of which have been or are being constructed as "hulls only." Great difficulty has been experienced on the Atlantic Coast in obtaining suitable lumber for these ships, and it is anticipated that there will be greater delay in their completion than was expected when this movement was begun, notwithstanding every possible effort on the part of the corporation and its contractors.

Since August 1 there have been awarded contracts for 155 steel cargo vessels of 1,076,800 tons dead-weight tonnage, distributed among six shipyards.

Previous to August 1 seventy steel cargo vessels, of 587,000 tons total dead-weight capacity, had been contracted for. These vessels were distributed among ten shipyards. Therefore, at the present time the total number of steel vessels under construction for the United States is 225, with a total aggregate dead-weight tonnage of 1,663,800.

Summary

There were under construction for the Emergency Fleet Corporation on September 26:

Number and type of vessel.	Total dead-weight. Tonnage.
353 wood	1,253,900
58 composite	207.000
225 steel	1,663,800
400 requisitioned vessels	2,800,000
1,036	5,924,700

In addition to the above, Congress, in a pending bill, is authorizing the construction of additional vessels whose total dead-weight capacity will be nearly 5,000,000 tons. Plans for the major portion of these additional vessels are now in course of preparation, and many of them will be of special types adapted to particular necessities of war, and, while substantially cargo carriers, will have much greater speed than the cargo vessels now under construction.

Industrial Service Department

The Fleet Corporation has instituted an industrial service department, which, by co-operation with the Department of Labor, is undertaking to assist shipbuilders and others in the employment of suitable labor and to indicate an extensive system of vocational training, with the purpose of adapting allied trades and unskilled labor for service in shipyards, and, through co-operation with the Y.M.C.A. organization throughout the United States, to give attention to the housing and personal affairs of the men recruited for shipbuilding work.

With the passage of this bill the Congress will have authorized $1,984,000,000 for the Shipping Board and the Emergency Fleet Corporation.

Wooden Ships Under Construction in Canada

The Department of Marine, Ottawa, furnishes the following list of wooden vessels under construction in Canada during the month of August, 1917. This list does not include any vessels being built for the Department of the Naval Service or for the Imperial Munitions Board:

Steam and Motor Ships Under Construction in Canada in August, 1917

		Wood	Gross Tonnage
Atlantic Coast.			
Shelburne Shipbuilders Ltd., Shelburne, N.S.	1	cargo steamer	320
Robert Rutledge, Sheet Harbour, N.S.	1	carbo steamer	325
Sincennes-McNaughton Lines, Sorel, Que.	1	tug	420
Great Lakes.			
Georgian Bay Shipbuilding & Repairing Company, Midland, Ont.	1	tug	40
Pacific Coast.			
*Wallace Shipyards, Ltd., N. Vancouver, B.C.	†2	aux. schooners	3000
*Cameron-Genoa Mills Ltd., Vancouver, B.C.	†3	aux. schooners	4500
British Yukon Navigation Co.	1	pass. and freight river steamer	1000
†Motor engines. *Since launched.	1	gasoline boat	100

Sailing Vessels

		Wood	Gross Tonnage
Atlantic Coast.			
J. W. Comeau, Comeauville, N.S.	1	schooner	329
Dr. McDonald, Meteghan, N.S.	1	schooner	544
John Deveau, Meteghan, N.S.	1	schooner	400
Innocent Comeau, Little Brook, N.S.	1	schooner	250
Omer Blinn, Grosses Coques, N.S.	1	schooner	375
Theriault Bros., Belliveau Cove, N.S.	1	schooner	350
J. N. Rafuse, Bridgewater, N.S.	3	schooners	755
Leary & Sons, Bridgewater, N.S.	2	schooners	265
L. E. Graham, Port Greville, N.S.	1	schooner	360
Robar Brothers, Bridgewater, N.S.	1	schooner	130
W. R. & C. A. Huntley, Parrsboro, N.S.	2	schooners	650
Wagstaff & Hatfield, Port Greville, N.S.	1	schooner	400
G. M. Cochrane, Fox River, N.S.	3	schooners	1349
James E. Pettis, Spencers Island, N.S.	1	schooner	425
T. K. Bentley, Advocate Harbour, N.S.	1	schooner	449
Esther Harkinson Shipping Co., Belliveau Cove, N.S.	1	schooner	360
Southern Salvage Company, Liverpool, N.S.	3	schooners	530
J. Steadman Gardner, Liverpool, N.S.	1	schooner	340
W. K. McKean Company, Liverpool, N.S.	1	schooner	400
Albert Parsons, Walton, N.S.	1	schooner	400
W. C. McKay & Son, Shelburne, N.S.	3	schooners	480
J. Ernst & Son, Mahone Bay, N.S.	1	schooner	520
John McLean & Sons, Mahone Bay, N.S.	1	schooner	95
Smith & Rhuland, Lunenburg, N.S.	2	schooners	225
Lewis Hardwood Co., Lewiston, N.S.	2	schooners	1000
E. F. Williams, Dartmouth, N.S.	1	schooner	350
Quebec Shipbuilding & Repairing Co., St. Laurent, Que.	2	schooners	2600
J. A. Balcom Co., Ltd., Margaretville, N.S.	1	schooner	409
Meteghan Railway & Shipbuilding Co., Meteghan, N.S.	1	schooner	470
Shelburne Shipbuilders Ltd., Shelburne, N.S.	1	schooner	350
Robert Rutledge, Sheet Harbour, N.S.	1	schooner	300
J. W. Raymond, Port Maitland, N.S.	1	schooner	375

"Brazel Patent" SNOW PLOWS

Known in every Camp from the Atlantic to the Pacific as the most satisfactory Snow Plow made.

Combination Model, Lumberman's Snow Plow, can be used either with or without Rut Cutter.

One man to operate. Adjusting wheels close together make change for light or heavy work in an instant. Wings placed to throw snow 9 ft. wider than sleigh track or narrower if desired. Height of mouldboards prevent snow falling back on track. BRAZEL PLOWS cut 6 in. wider than logging sleighs, roll snow outside track and away from roadway. Cut off knolls, fill up holes and leave a perfectly level road. Cut off dirt and manure heaps from an ice road, leaving a clean roadbed. Roll up and push entirely away from the road, 18 inches of loose snow each time the plow passes over.

THE BATEMAN-WILKINSON CO., LIMITED
300 Symington Ave., Toronto, Can.

Successors to the WILKINSON PLOW CO., LIMITED
Catalogue and prices on application.

TORONTO, CANADA

All Wool MACKINAWS

Plain and Fancy Patterned

THE MACKINAW "WIND BREAK" or SWEATER (as shown in accompanying illustration) has all the advantages of a Sweater and Jumper combined. Heavy felted to break wind. Absolutely all pure wool. Knit wool sweater cuffs. Adjustable collar to be worn open or closed. Two pockets, grey, red or brown with black check.

Write for Samples and Prices

Smart-Woods LIMITED

Ottawa - Montreal - Toronto - Winnipeg

JENCKES LOG HAULER

The engraving shown in this advertisement is made from a photograph of the Log Hauler recently furnished the Davison Lumber Company, taken as it was being tested out in our yards.

This type of Log Hauler is coming into use.

Quotations and particulars on application.

The Jenckes Machine Co., Limited

SHERBROOKE MONTREAL 908 E.T. Bank Bldg. COBALT TORONTO 710 C.P.R. Bldg. ST. CATHARINES VANCOUVER 616 Standard Bank Bldg.

Works: SHERBROOKE, QUE.; ST. CATHARINES, ONT.

Registered

Trade Mark

FOR SALE

Quebec Birch

6/4 No. 1 Common and Better	5	Cars.
8/4 No. 1 Common and Better	10	"
12/4 No. 1 Common and Better	10	"
8/4 No. 2 Common and Better	5	"
12/4 No. 2 Common and Better	5	"
4/4 Log Run Mill Culls Out	20	"
12/4 Sound Boxed Hearts	5	"
16/4 Sound Boxed Hearts	5	"

Quebec Spruce

2 x 4 x 10/16 Merchantable	2	Cars.
5 x 10/16 "	4	"
6 x 10/16 "	10	"
7 x 10/16 "	2	"
8 x 10/16 "	5	"
9 x 10/16 "	4	"
11 up 10/16 "	5	"
3 x 4/6 x 6/16 Merchantable	5	Cars.
6 x 6/16 "	5	"
7 x 6/16 "	4	"
8 x 6/16 "	8	"
9/11 x 6/16 "	2	"
1 x 4 in. and up 6/16 Mill Cull	5	Cars.
2 x 4 in. and up 6/16 Mill Cull	15	"
3 x 4 in. and up 6/16 Mill Cull	2	"

If any of the above interest you, will be pleased to quote prices

E. M. NICHOLSON & CO.

202 Board of Trade Building

MONTREAL

Wooden Shipbuilding in South

Busy Yards on Gulf and Atlantic Coasts Turn Out Ship a Day for Transatlantic Work

Thirty thousand men at 40 shipyards along the Gulf and Atlantic coasts of the United States are now rushing to completion 250 hulls for ships which will compose the initial unit of Uncle Sam's great wooden fleet to "bridge the ocean."

Seven to eight months after construction was begun, many of these ships will be ready for sea, and from that time on the United States Government will be able to add to the Allies' ocean tonnage, as long as needed, a new wooden ship of 3,000 to 3,500 tons capacity for every working day in the year. This is in addition to almost as many other wooden ships being built for private interests.

New yards are springing up at many points to meet the requirements of the United States Shipping Board, which has announced its determination to build all the ships of both wood and steel than can be produced during the period of the war.

Four hundred million feet of southern pine timbers will be needed within the next twelve months to complete the government's wooden shipbuilding programme.

Shipyards Hum on Wooden Hulls Along Gulf Coast

It took a world war to make the South a shipbuilding section, but when the word was given, the result surpassed the wonderful things which Aladdin performed by rubbing his magic lamp. A year ago a large vessel had not been constructed south of Newport News. Now the total shipbuilding under way in the South from Baltimore to Galveston amounts to $370,000,000, of which $90,000,000 is being built at the Newport News yards and $280,000,000 in new shipbuilding yards which have been developed in the last ten months, and most of them within the last five months.

It is in the rush work of building wooden ships that the South is furnishing its big bit in the world fight to preserve democracy. Altogether 298 wooden ships and 119 steel vessels are in course of construction in the South. The toonage of steel vessels will be 734,650 tons, and the cost $150,000,000, while the tonnage of the wooden vessels will be 861,400 tons and the cost $130,000,000. Added to this is the sum of $30,000,000 being spent by the government on the construction of battleships, cruisers and other war vessels in the Newport News yards. As an economic proposition the fact that two and one-half times as many wooden vessels, with 135,000 tons greater capacity, can be built at $20,000,000 less cost furnishes a splendid illustration.

Jahncke Yards Busy

At Madisonville, La., the Jahncke Shipbuilding Company is working rapidly on four wooden ships, and planning for building a large number. At Slidell, La., the Salem Shipbuilding Company's plant is noisy with work. At Slidell, on December 31 last, one of the first large ships ever constructed in the South was launched.

The number of wooden ships under actual construction at Orange, Texas, is twenty-one, of a total of 75,100 tons. Three plants there also have under construction thirty-five additional ships with a capacity of 139,500 tons. Cost of vessels now under construction is $7,510,000, and of the additional thirty-five contracted for $13,915,000. One of the ships constructed at Orange already has reached a European port with a cargo, she having made 16 knots an hour during a part of her voyage. Half a dozen companies are engaged in the work of shipbuilding, while many other ventures are being talked of. Almost 500 men are employed in the different yards, giving a payroll of $75,000 a week. It will require more than two years to complete all contracts now in hand. The activities at Orange are all on the Louisiana side of the Sabine River.

Pascagoula Active Center

Pascagoula, Miss., which for years has been one of the busiest lumber manufacturing places in the world, has sprung rapidly into a wooden shipbulding center.

The Henry Piaggio Shipbuilding Company, which is engaged in building vessels at Orange, is also developing plants at Gulfport and Moss Point, Miss., in the immediate vicinity of Pascagoula. It has procured a site at Moss Point, 1,600 by 720 feet, water front, and is building ten sets of ways.

The L. N. Dantzler Lumber Company, which has immense sawmills at Moss Point, has constructed a shipyard to build ships for its own use, at a point on the East Pascagoula River, about half a mile south of the Escatawpa River, at Griffin's point. It is laying the keels of three vessels of 1,250 and 1,500 tons, and has put to work 300 additional men.

The City of Gulfport Shipbuilding Company has been organized with a capital of $200,000. Henry Piaggio is also interested in it. The

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company is planning for the construction of a number of wooden ships, and has obtained a site for its plant.

Lake Charles Gets in Line

At Lake Charles and Morgan City, La., preparations also are being made for extensive shipbuilding, and with expected contracts these two towns may be busy constructing a dozen vessels in the next few months.

The City of Gulfport Shipbuilding Company at Gulfport has contracts for four 2,300-ton steamships and one 2,000-ton schooner. It will give employment to 1,000 men.

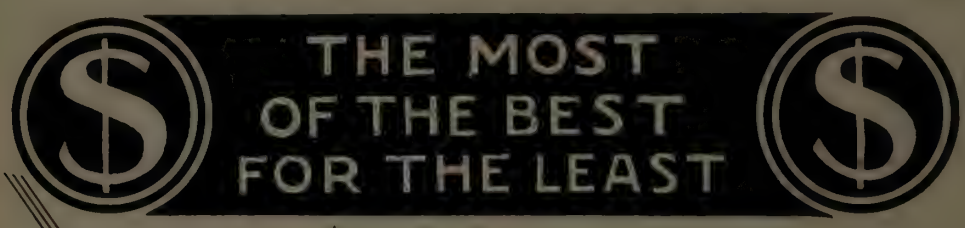
Mobile, Ala., is quite active in the shipbuilding line, and there has been talk of many shipbuilding ventures there. The Alabama Dry Dock and Shipbuilding Company is enlarging its various departments and is laying off two new yards for construction. Locomotive cranes and tracks are being installed. In addition to proceeding with plans for constructing an 8,000-ton dry dock, this company has accepted contracts for the building of four mine sweepers and two 3,500-ton full-rigged ships for a Philadelphia concern. One 500-ton schooner is now nearing completion on the stays. Rapid progress is being made on the four submarine chasers being built by the Barrett Shipbuilding Company of Mobile. The Murnan Shipbuilding Company also is making progress, having recently completed a 1,000-ton marine way. A runway for a locomotive traveling crane is also being constructed.

That the South is not seeking excess profits out of the necessity of hurriedly building a merchant marine was shown in the action of the lumbermen who, through the Southern Pine Association, accepted contracts for Southern pine timbers at $35, which was ten dollars a thousand feet under the market. The government has since voluntarily advanced the price paid for ship timbers to $40 a thousand feet, after an investigation into the cost of manufacture.

Why Shipbuilding Has Revived

A cable from London to the Toronto Star recently said: Winning the war is absolutely dependent upon the ability of the shipyards of Great Britain and the United States and Canada to turn out merchant tonnage quickly. As to this, I find the highest shipping authorities absolutely agreed. One of the best informed told me to-day that the position would be better realized by fixing attention upon the minimum that must be done month by month, rather than by promulgating elaborate paper estimates of what may be accomplished or not accomplished in a year. "Moreover," he said, "we have but to glance at the British, French, and Italian published reports about the sinkings to grasp the fact that the weekly average of the allied losses continues at twenty vessels, average 5,000 tons each. This means that to keep ahead of the game the allies must launch at least thirty such vessels, totaling approximately 150,000 tons a week. This, in turn, means that the shipyards of Great Britain and the United States, in friendly rivalry, must manage to complete practically 8,000,000 merchant tonnage within thirteen months. Many factors necessitate this 50 per cent. margin of safety. Not merely the shortage of British dock labor for loading, but the necessity of conveying merchantmen of different speeds in groups reduces the number of round trips of which the faster ships are capable. A well-informed writer in the Daily Telegraph points out that the British shipyards' output in a normal peace year had reached 2,000,000 of merchant tonnage in addition to the heavy naval demands, but that under war conditions it was not likely that they would be able to exceed Lord Curzon's recent estimate of 3,000,000 tons within a year. This leaves approximately 5,000,000 tons as the minimum for which the allies will be dependent on the American shipyards. While this may seem to be a large order, I have no doubt that the nation which emerged from the Civil War with a mercantile marine greater than Britain's, not to mention the ironclads, an American invention which was the precursor of a modern steel battleship, will rise to the present occasion in a way that will surprise the world."

During the past seven years the firm of J. Ernst & Son, Ltd., Mahone Bay, N.S., who are extensive dealers in West India products, have turned out about thirty vessels, principally fishing schooners. This summer the firm built a 400-ton three-masted schooner, and are now engaged on an up-to-date fishing schooner. When this is completed they will start upon another large schooner. The company recently was formed into a joint stock company in order to carry on business more extensively. The vessel launched by this firm on July 18 was a handsome tern schooner named the "Jean Dundonald Duff." Her dimensions are: Keel, 111 feet; breadth, 32 feet; depth of hold, 12 ft. 6 in. She measured 404 tons gross and 345 tons register. Her first cargo was taken on at Bridgewater for Madeira.



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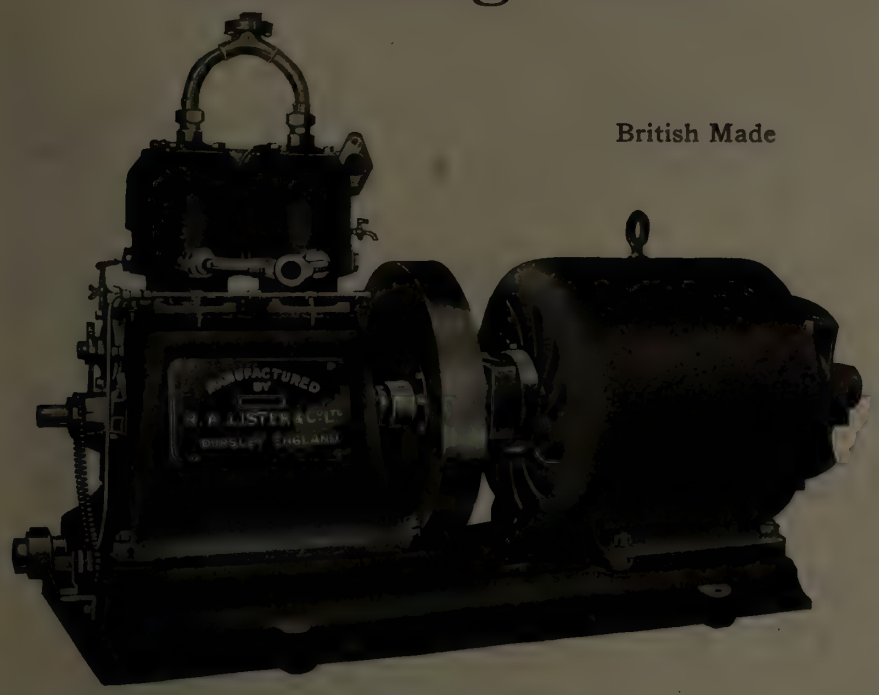

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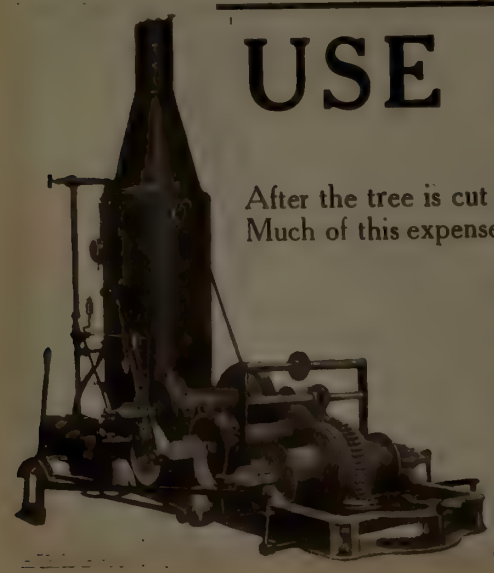

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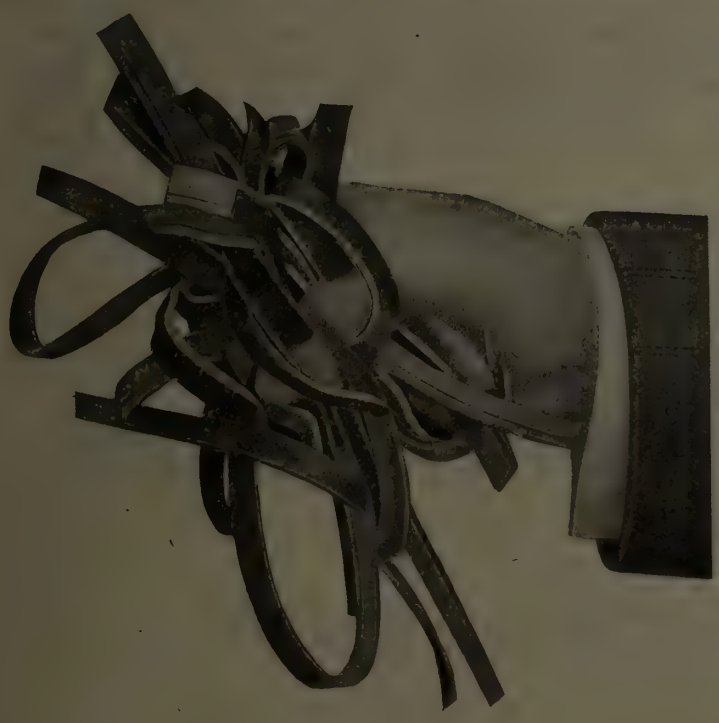

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Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the **Morgan Machine Company** for latest developments in machinery for the Box Industry.

Morgan Machine Company

ROCHESTER, N. Y.

McClary's Algoma Steel Ranges

For Wood or Coal

Constructed Specially for Railroad, Mining Camps and other Heavy Work

No.	Size of Oven	Size of Cooking Surface	Length of Fire Box	Shipping Weight
516	16 x 27 x 15½	28 x 46	28½	325
525	24¼ x 27¼ x 16	28 x 54½	28½	462
535	35 x 27 x 15½	28 x 65	28½	565

McClary's Camp Comfort

For Burning Wood

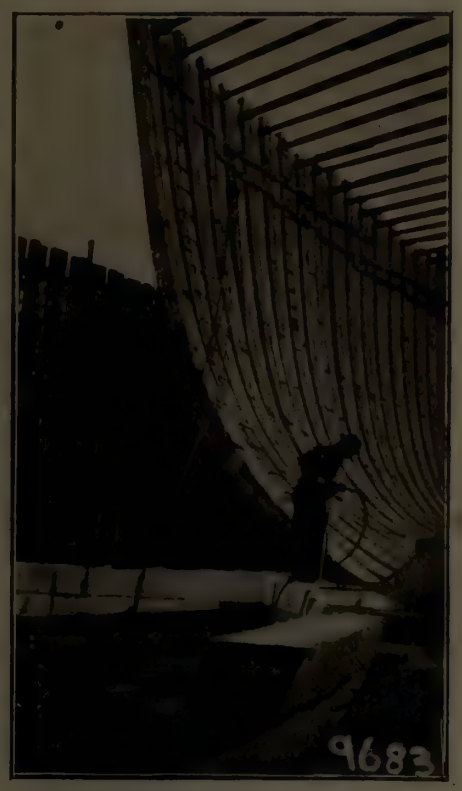
"A Sturdy Heater for Camps"

Steel Body with Cast Legs, Door and Frame

Nos.	Dia. in Inches	Length in Inches	Shipping Wt.
36	22	36	175
42	22	42	212
52	22	52	230

McClary's

London, Toronto, Montreal, Hamilton, Winnipeg, Vancouver, St. John, N.B., Saskatoon, Calgary



YOU NEED "LITTLE DAVID"
FOR WOODEN SHIPBUILDING
— MORE WORK AND LESS WORRY —

The "Little David" Wood Borer is the "Shipbuilders' Wood Boring Machine," because it is light, powerful and speedy, and above all, simple and durable.

It is made in three sizes, the smallest boring holes in wood 1″ diameter and under, and the largest, 4″ diameter and under.

All sizes are reversible, and the cases are of aluminum with steel bushed cylinders. This explains why the largest size is about ten pounds lighter than any other wood borer of equal capacity.

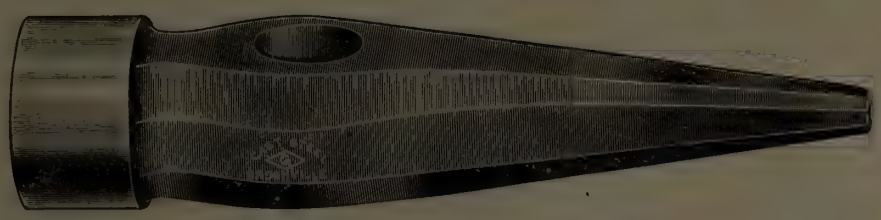
We have other labor-savers for wooden ship work, such as the CC-101 Drift Bolt Driver, Pneumatic Hammers adapted for trenail driving, and Pneumatic Tools for horsing oakum, etc.

Our nearest branch will be glad to give you full information, and to send bulletins, etc., at any time.

CANADIAN INGERSOLL-RAND CO., Limited
COMMERCIAL UNION BUILDING, MONTREAL. CANADA
Works : SHERBROOKE, Que.

Branches: Sydney Toronto Cobalt Timmins Winnipeg Nelson Vancouver

SHIP MAULS



No. 45. SOLID CAST STEEL

BLACK FINISH. POLISHED HEAD AND PEIN. 2½-inch FACE.

WEIGHTS: **4** lbs. **4½** lbs. **5** lbs. **5½** lbs. **6** lbs. **7** lbs. **8** lbs.

The cut shows the MOST POPULAR MODEL of MAUL now on the market. It is a great seller and gives good satisfaction to builders using it. You should have a good stock of them on hand. Send us your inquiries and orders. We also have many other tools of interest to ship builders.

CANADA FOUNDRIES AND FORGINGS, LIMITED
THE JAMES SMART CO. PLANT
BROCKVILLE, Ont. WINNIPEG, Man.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:

1 inch No. 1 cuts and better.	$50 00	52 00
1½ inch No. 1 cuts and better.	62 00	64 00
2-in. No. 1 cuts and better	64 00	66 00
1½-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	52 00	54 00
4/4 No. 2 and 3 cuts		33 00
5/4 and 6/4 No. 2 and 3 cuts	42 00	44 00
8/4 No. 2 and 3 cuts	44 00	46 00
1-in. Good Shorts		45 00
1 x 4 and 5 com. and dressing	37 00	38 00
1 x 6 common and dressing ...	39 00	40 00
1 x 8 common and dressing ...	40 00	41 00
1 x 10 common and dressing ...	44 00	46 00
1 x 12 common and dressing ..	48 00	50 00
1 x 10 and 12 mill cull stocks	33 00	35 00
1-in. mill cull sidings	30 00	32 00
5/4 and 6/4 x 4 m.r., m.c. out.	38 00	40 00
5/4 and 6/4 x 5 m.r., m.c. out.	38 00	40 00
5/4 and 6/4 x 6 m.r., m.c. out.	39 00	41 00
5/4 and 6/4 x 8 m.r., m.c. out.	39 00	41 00
5/4 and 6/4 x 10 m.r., m.c. out.	45 00	47 00
5/4 and 6/4 x 12 m.r., m.c. out.	48 00	50 00
2 x 10 common	37 00	39 00
2 and 3 x 12 common	39 00	41 00
1 x 8 inch box and common..	35 00	37 00
1 x 10 inch box and common..	36 00	38 00
1 x 12 inch box and common..	88 00	40 00
1-in. mill run sidings	40 00	42 00
1-in. mill run shorts	33 00	35 00
1-in. mill run Norway	31 00	32 00
2-in. mill run Norway	33 00	35 00
Norway, c. and cf. 1-in.	40 00	42 00
Norway, c. and cf. 1½-in. ...	42 00	44 00
Norway, c. and cf. 2-in.	42 00	44 00
Spruce mill run 1-in. and 2-in.	33 00	35 00
Spruce mill culls	28 00	30 00

Hemlock, No. 1:

1 x 4 and 5-in. x 9 to 16 ft. ..		27 00
1 x 6-in. x 9 to 16 ft.	30 00	31 00
1 x 8-in. x 9 to 16 ft.	32 00	33 00
1 x 10 and 12 in. x 9 to 16 ft.	32 00	33 00
1 x 7, 9 and 11 in. x 9 to 16 ft.	30 00	31 00
1 in. No. 2, 6-ft. to 16-ft.	24 00	25 00
2 x 4 to 12, 10 and 16 ft.	30 00	31 00
2 x 4 to 12 ft., 12 and 14 ft. ..	30 00	31 00
2 x 4 to 12 in., 18 ft.	32 00	33 00
2 x 4 to 12 in., 20 ft.	33 00	34 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	24 00	25 00
Clear in. B.C. cedar, kiln dried	50 00	55 00

Douglas Fir:

Dimension Timber up to 32 feet:

8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	43 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16	44 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.	44 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.	45 00
10x20, 18x20, up to 32 ft.	45 50
6x18, 8x18, up to 32 ft.	45 50
6x20, 8x20, up to 32 ft.	45 00

Timber in lengths over 32 feet subject to negotiation.

Fir flooring, 1 x 3, edge grain..	43 50
Fir flooring, 1 x 4, edge grain..	46 50
Fir flooring, 1 x 4, flat grain..	39 50
No. 1 and 2, 1-in. clear Fir rough	50 75
No. 1 and 2, 1¼ and 1½ in., clear Fir rough	56 00
No. 1 and 2, 2-in. clear Fir rough	52 00
1½-in. No. 1, 4-ft. pine lath.	6 00
1½-in. No. 2 4-ft. lath	5 70
1½-in. 32-in. pine	2 75
1½-in. No. 1 4-ft. hemlock lath.	4 50
1½-in. mill run hemlock lath.	4 25
XX B. C. cedar shingles	3 05
XXX 6 butts to 2-in.	4 20
XXXXX	4 75

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2 in.		79 00
Ash, white, No. 1 common ...		55 00
Ash, brown, 1sts and 2nds, 4/4		60 00
Ash, brown, com. and bet. ...		48 00
Ash, brown, 1sts and 2nds, 6/4 and 8/4		68 00
Birch, 1st and 2nds, 4/4		58 00
Birch, No. 1 com. and bet., 4/4		47 00
Rich, 1st and 2nds, 6/4 and 8/4		64 00
Birch, 1st & 2nds, 10/4 and 12/4		74 00
Birch, 1st and 2nds, 16/4		82 00
Basswood, 1sts and 2nds, 4/4 ..		51 00
Basswood, No. 1 com. and bet., 4/4	45 00	47 00
Basswood, No. 2 and 3 common		28 00
Basswood, 6/4 and 8/4, 1sts and 2nds	58 00	60 00
Basswood, 6/4 and 8/4, com. and bet.		53 00
Basswood, 4/4, No. 2 com. and bet.		42 00
Soft elm, 1sts and 2nds, 4/4 ..		47 00
Soft Elm, No. 1 com. and bet., 4/4		43 00
Soft Elm, No. 2 and 3 common		24 00
Soft Elm, 6/4 and 8/4, 1 and 2		61 00
Rock Elm, 1sts and 2nds, 6/4 and 8/4		65 00
Rock Elm, No. 2 com. and bet., 6/4 and 8/4		45 00
Soft Maple, 1sts and 2nds, 4/4..		48 00
Soft Maple, com. and bet., 4/4.		38 00
Soft Maple, 6/4 and 8/4, 1sts and 2nds		55 00
Hard Maple, 1sts and 2nds, 4/4		51 00
Hard Maple, com. and bet., 4/4		43 00
Hard Maple, 12/4, 1sts and 2nds	65 00	72 00
Hard Maple, 16/4, 1sts and 2nds	82 00	85 00
Red Oak, plain, 1sts and 2nds, 4/4		62 00
Red Oak, plain, No. 1 com., 4/4		42 00
Red Oak, plain, No. 2 com., 4/4		32 00
Red Oak, plain, 1sts and 2nds, 6/4 and 8/4		75 00
Red Oak, plain, 1sts and 2nds, 12/4 and 16/4	89 00	96 00
White Oak, plain, 1sts and 2nds, 4/4		62 00
White Oak, plain, No. 1 com., 4/4		42 00
White Oak, plain, No. 2 com., 4/4		32 00
Red and White Oak, plain, 1sts and 2nds, 5/4 and 6/4	69 00	71 00
Red and White Oak, plain, No. 1 com., 5/4 and 6/4		46 00
Red and White Oak, plain, No. 2 com., 5/4 and 6/4		35 00
Red and White Oak, plain, 1sts and 2nds, 8/4		76 00
Red and White Oak, plain, No. 1 com., 8/4		52 00
White Oak, plain, 1sts and 2nds, 12/4 and 16/4	89 00	96 00
White Oak, ¼ cut, 1sts and 2nds, 4/4		88 00
White Oak, ¼ cut, 5/4 and 6/4 1sts and 2nds		91 00
White Oak, ¼ cut, No. 1 com.		57 00
Hickory, 1sts and 2nds, 4/4 ...		70 00
Hickory, 6/4, 1sts and 2nds..		77 00
Hickory, 8/4, 1sts and 2nds ..		84 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$60 00	70 00
1¼-in. and 1½-in. x 8-in. & up	70 00	75 00
2-in. x 7-in. and up	72 00	76 00
No. 2 cuts 2 x 8-in. and up ..	45 00	50 00
Pine good strips:		
1-in.	45 00	48 00
1¼-in. and 1½-in.	55 00	56 00
2-in.	56 00	57 00
Pine good shorts:		
1-in. x 7-in. and up	45 00	50 00
1-in. x 4-in. to 6-in.	32 00	36 00
1¼-in. and 1½-in.	53 00	55 00
2-in.	54 00	56 00
7-in. to 9-in. A sidings	30 00	34 00
Pine, No. 1 dressing sidings ...	42 00	47 00
Pine, No. 1 dressing strips ...	40 00	43 00
Pine, No. 1 dressing shorts ...		36 00
Pine, 1-in. x 4-in. s.c. strips....	34 00	36 00
Pine, 1-in. x 5-in. s.c. strips....	35 00	37 00
Pine, 1-in. x 6-in. s.c. strips....		38 00
Pine, 1-in. x 7-in. s.c. strips....		38 00
Pine, 1 x 8-in. s.c., 12 to 16 ft.	38 00	39 00
Pine, 1-in. x 10-in. M.R.	40 00	44 00
Pine, s.c. sidings, 1½ and 2-in.	38 00	42 00
Pine, s.c. strips 1-in.	34 00	35 00
1¼, 1½ and 2-in.	36 00	37 00
Pine, s.c. shorts, 1 x 4 to 6 in.	28 00	31 00
Pine, s.c. and bet., shorts 1 x 5	30 00	32 00
Pine, s.c. and bet. shorts, 1 x 6	31 00	33 00
Pine, s.c. shorts, 6'-11', 1"x 10"		36 00
Pine box boards:		
1"x 4" and up, 6'-11'	25 00	26 00
1"x 3", 12'-16'	26 00	28 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	28 00	30 00
and up, 6-ft. to 11-ft.	24 00	26 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.		25 00
O. culls r & w p	18 00	20 00
Red Pine, log run:		
mill culls out, 1-in.	28 00	30 00
mill culls out, 1¼-in.	32 00	33 00
mill culls out, 1½-in.	32 00	33 00
mill culls out, 2-in.	34 00	36 00
mill culls, white pine, 1"x 7" and up	30 00	32 00
Mill run Spruce:		
1"x 4" and up, 6' 11'	24 00	25 00
1"x 4" and up, 12'-16'		30 00
1"x 9"-10" and up, 12'-16'	36 00	38 00
1¼"x 7" 8-9" and up, 12'-16'		35 00
1¼"x 10" and up, 12'-16' ...	36 00	38 00
1½" & 2"x12" and up, 12'-16'		40 00
Spruce, 1-in. clear (fine dressing and B)	36 00	38 00
Hemlock, 1-in. cull	16 00	18 00
Hemlock, 1-in. log run	23 00	24 00
Hemlock, 2x4, 6, 8, 10, 12/16' ..	26 00	28 00
Tamarac	24 00	26 00
Basswood, log run, dead culls out	30 00	40 00
Basswood, log run, mill culls out	26 00	28 00
Birch, log run	30 00	32 00
Soft Elm, common and better, 1, 1½, 2-in.	25 00	30 00
Ash, black, log run	32 00	40 00
1 x 10 No. 1 barn	40 00	45 00
1 x 10 No. 2 barn	38 00	40 00
1 x 8 and 9 No. 2 barn		38 00
Lath per M:		
No. 1 white pine, 1½-in. x 4-ft.	5 25	5 50
No. 2 white pine		5 00
Mill run white pine		5 25
Spruce, mill run 1½-in.		4 50
Red pine, mill run		4 75
Hemlock, mill run		4 00
32-in. lath	2 00	2 25
White Cedar Shingles:		
xxxx, 18-in.		5 00
Clear butt, 18-in.		4 00
18-in. xx		2 75
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

cts.

White Pine

First class Ottawa waney, 18-in. average, according to lineal.	75	80

Oak

According to average and quality	65	75

Elm

According to average and quality, 40 to 45 feet	80	85
According to average and quality, 30 to 35 feet	55	65

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Birch Planks

1 to 4 in.	20 00	25 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$74 00
1 in., 8 in. and up wide	83 00
1¼ and 1½ in. and up wide	86 00
2 in. and up wide	88 00

Cuts and Better

4/4 x 8 and up No. 1 and better	58 00
6/4 x 8 and up No. 1 and better	72 00
8/4 x 8 and up No. 1 and better	74 00
6/4 x 6 and up No. 2 and better	61 00
8/4 x 6 and up No. 2 and better	63 00
6/4 x 6 and up No. 3 and better	55 00
8/4 x 6 and up No. 3 and better	59 00

No. 1 Cuts

1 in., 8 in. and up wide	50 00
1¼ in., 8 in. and up wide	60 00
1½ in., 8 in. and up wide	61 00
2 in., 8 in. and up wide	65 00
2½ and 3, 8 in. and up wide	84 00
4 in., 8 in. and up wide	90 00

No. 2 Cuts

1 in., 6 in. and up wide	38 00
1¼ in., 6 in. and up wide	51 00
1½ in., 6 in. and up wide	52 00
2 in., 6 in. and up wide	55 00
2½, 3 and 4 in., 6-in. and up wide..	70 00

No. 3 Cuts

1 in., 6-in. and up wide		33 00
1¼ and 1½ in., 6-in. and up wide		38 00
2 in., 6-in. and up wide		39 00
2½, 3 and 4-in., 6-in. and up wide	45 00	48 00

Common and Dressing Mill Run

1-in. x 4-in.	36 00
1-in. x 5-in.	37 00
1-in. x 6-in.	39 00
1-in. x 8-in.	40 00
1-in. x 10-in.	41 00
1-in. x 12-in.	47 00
1-in. x 13-in. and up	47 00
1¼, 1½ and 2 in.	47 00

No. 1 Barn

1 inch	40 00	52 00
1¼, 1½ and 2-in.	50 00	54 00
2½ and 3-in.		60 00
4 inch		62 00

No. 2 Barn

1 inch	40 00	45 00
1¼, 1½ and 2-in.	43 00	48 00
2½ and 3-in.		50 00

No. 3 Barn

1 inch	36 00	42 00
No. 1, 1, 1¼, 1½, 2-in.		43 00

Box

No. 1, 1, 1¼, 1½, 2-in.	32 00	35 00
No. 2, 1¼, 1½, 2-in.		29 00

Mill Culls

Mill run culls, 1-in.		29 00
1, 1¼, 1½ and 2-in.		30 00
No. 2	27 00	29 00

Lath

No. 1, 32-in. pine	2 15
No. 2, 48-in. pine	5 25
No. 1, 48-in. pine	5 75
No. 3, 48-in. pine	4 75
Hemlock Lath, 48-in.	4 75

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac.

Dimension. S. 1 S. and 1 E.

	6 ft.	8 ft.	10 ft.	14 & 16 ft.
2 x 4, 6, 8 ..	16 00	19 00	22 50	23 50
2 x 10	20 00	20 50	23 50	24 50
2 x 12	20 00	21 00	25 50	25 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH.

Mountain Stock.

Dimension.

2 x 4, 8, 12, 14, 16	23 50
2 x 4, 10, 18, 20	25 50
2 x 6, 8 to 16	23 50
2 x 8, 8 to 16	23 50
2 x 4-6 and 8 in.; 24, 26, 28, 30, 32 ft.	31 50
2 x 10 and 2 x 12; 8-16 ft.	28 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	30 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	32 50

No. 1 Common Boards.

4 inch	23 00
6 inch	25 50
8, 10, 12 inch	27 50
Mixed widths	26 50

Flooring.

4 or 6 inch No. 1	37 00
4 or 6 inch No. 2	32 00
4 or 6 inch No. 3	26 00

Shiplap—Finished.

6 inch	24 00
8, 10 and 12 inch	25 00

Siding.

6 inch No. 1	37 00
6 inch No. 2	35 00
6 inch No. 3	27 00

Lath.

No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50

PINE—ROUGH TIMBER.

3 x 6 in.; 8 to 16 ft.	29 10
3 x 8 in.; 8 to 16 ft.	26 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	29 00
4 x 10 to 10 x 10, 8 x 8, 6x 12 in. up to 32 ft.	31 00

BRITISH COLUMBIA COAST FIR.

Dimension S1S and E.

2 x 4 in.; 6 and 8 ft.	27 00
2 x 4 in.; 12 and 14 ft.	28 00
2 x 4 in.; 10 and 16 ft.	29 00
2 x 4 in.; 18 and 24 ft.	30 00
2 x 4 in.; 22 and 24 ft.	31 00
2 x 4 in.; 26 to 32 ft.	33 00
2 x 10 in.; 10 to 16 ft.	29 00
2 x 10 in.; 18 and 20 ft.	31 00
2 x 10 in.; 22 and 24 ft.	32 00
2 x 10 in.; 26 to 32 ft.	34 00
2 x 14 in.; 10 to 16 ft.	34 00
2 x 14 in.; 18 and 20 ft.	36 00
2 x 14 in.; 22 and 24 ft.	37 00
2 x 14 in.; 26 to 32 ft.	39 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	30 00
3 x 3 and 3 x 4 in.; 16 ft.	31 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	32 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	33 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	35 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	33 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	33 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	34 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	34 50

FLOORING.

Nos. 1 and 2, 1 x 3 in., E. G.	42 00
Nos. 1 and 2, 1 x 4 in., E. G.	45 00
Nos. 1 and 2, 1 x 6 in., E. G.	42 00
Nos. 1 and 2, 1 x 4 in., F. G.	35 00
Nos. 1 and 2, 1 x 6 in., F. G.	40 00
No. 3, 1 x 4 in.	33 00
No. 3, 1 x 6 in.	38 00

SHIPLAP.

B. C. fir, 6 in.	28 00
B. C. fir, 8, 10, 12 in.; 8 to 16 ft.	29 00
No. 2 shiplap, 6 in.	22 00
No. 2 shiplap, 8, 10 and 12 in.	24 50

FIR COMMON BOARDS, S1S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	28 00
Common boards, 8 to 12 in.	29 00
No. 2 mixed widths	24 00
No. 2 boards, 8 to 12 in.	25 50

SHINGLES.

XXX B. C. cedar	3 35

LATH.

Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's	4 50
Cedar lath, ⅜ x 1⅜ in. x 4 ft.	5 25

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers, 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	38 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	38 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00
No. 1 Moulding 8/4	62 00

(Continued on page 114)

Our Modern Woodworking Plant

Can Supply You with the Best At Lowest Possible Prices

Special Facilities for Dressing Lumber in Transit

If you are in need of a particularly high grade quality of dressed lumber, doors, sash frames, etc., especially for shipbuilding purposes, it will be advantageous for you to get our quotations and stock list.

And again, we can offer you remarkable service. Our modern equipped plant enables us to prepare, even special work, with the greatest despatch.

However, we have always a large and complete stock on hand of the following :

Doors, Sash Frames, Mouldings, Turnings, Veneered Hardwood Doors, "Empire Brand" Hardwood Flooring

Let us send you our Price and Stock List to-day. Our products are the best at the lowest possible prices.

J. R. EATON & SONS, LIMITED

Orillia - Ontario

CURRENT LUMBER PRICES — Continued

No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda.

	1s & 2s	No. 1 Com.	No. 2 Com.
MAPLE			
4/4	43 - 45	25 - 27	15 - 17
5/4 to 8/4	55 - 57	33 - 35	17 - 21
10/4 to 16/4	65 - 67	45 - 47	25 - 27
RED BIRCH			
4/4	58 - 60	38 - 40	22 - 24
5/4 to 8/4	60 - 62	40 - 42	24 - 26
SAP BIRCH			
4/4	48 - 50	32 - 34	20 - 22
5/4 and up	50 - 52	34 - 36	22 - 24
SOFT ELM			
4/4	40 - 42	28 - 30	20 - 22
5, 6 & 8/4	42 - 44	30 - 32	20 - 22
BASSWOOD			
4/4	44 - 46	34 - 36	22 - 24
Thicker	42 - 44	32 - 34	22 - 24
PLAIN OAK			
4/4	52 - 54	33 - 35	19 - 21
5/4 to 8/4	51 - 53	29 - 31	17 - 19
ASH, WHITE AND BROWN			
4/4	51 - 54	29 - 31	19 - 21
5/4 to 8/4	61 - 64	34 - 36	20 - 22
10/4 and up	74 - 87	46 - 48	22 - 24

BOSTON, MASS.

White pine uppers, 1 to 2 in.		119 00
Selects, 1 to 2 in.	106 00	109 00
Fine common, 1 in.		78 00
Fine common, 1¼ to 2 in.	85 00	87 00
No. 1 Cuts, 1 in.		60 00
No. 1 Cuts, 1¼ to 2 in.	70 00	75 00
No. 2 Cuts, 1 in.		49 00
No. 2 Cuts, 1¼ to 2 in.	60 00	66 00
Barn Boards, No. 1, 1 x 12		55 00
No. 1, 1 x 10		52 00
No. 1, 1 x 8		49 00
No. 2, 1 x 12		50 00
No. 2, 1 x 10		50 00
No. 2, 1 x 8		49 00
No. 3, 1 x 12		48 00
No. 3, 1 x 10		47 00
No. 3, 1 x 8		46 00
Canadian spruce boards		36 00
Spruce, 12 in. dimension		46 00
Spruce, 10 in. dimension		44 00
Spruce, 9 in. dimension		43 00
Spruce, 8 in. under dimen.		40 00
10 and 12 in. random lengths, 8 ft. and up	42 00	43 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7,		34 00
3 x 4 and 4 x 4 in.		35 00
2 x 8 in.		38 00
All other random lengths, 7-in. and under, 8 ft. and up		34 00
5-inch and up merchantable boards, 8 ft. and up, p 1s		33 00
1 x 2		30 00
1 x 3		29 00
1⅝ in. spruce lath		4 25
1½-in. spruce lath		4 35

New Brunswick Cedar Shingles

Extras		4 50
Clears		4 15
Second Clears	3 25	3 50
Clear whites	2 50	2 75
Extra 1s (Clear whites in)	1 75	2 25
Extra 1s (Clear whites out)	1 65	1 90
Red Cedar Extras, 16-in. 5 butts to 2-in.		5 00
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		5 40
Red Cedar Perfections, 5 butts to 2¼		6 00
Washington 16-in. 5 butts to 2-in. extra red cedar		4 80

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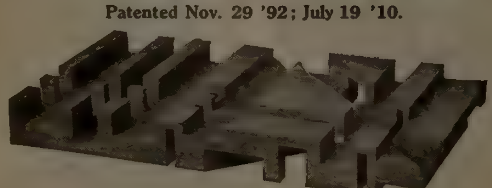

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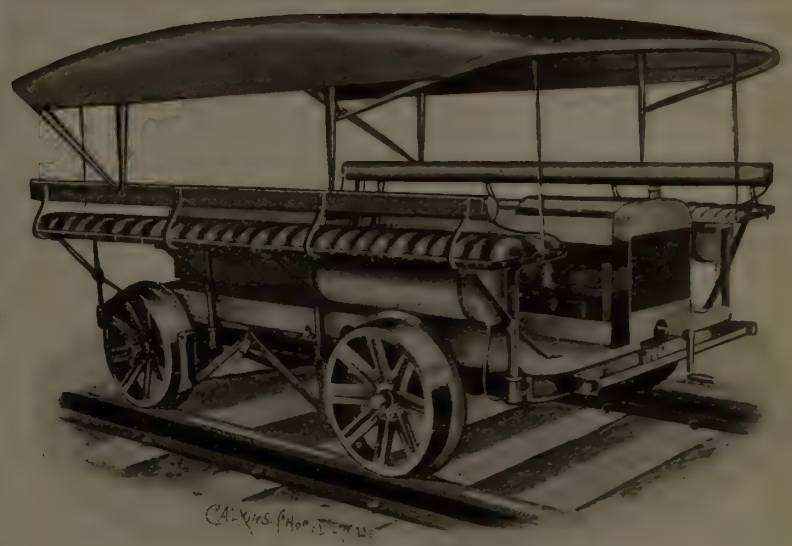

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(Continued on page 118)

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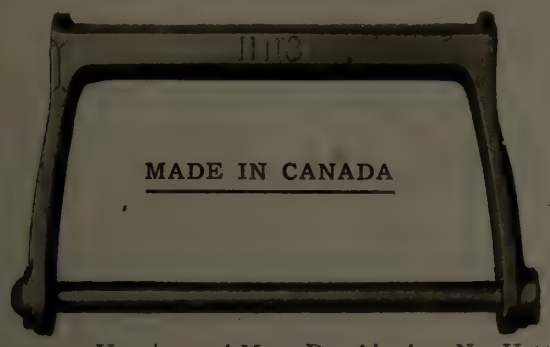

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(Continued on page 120)

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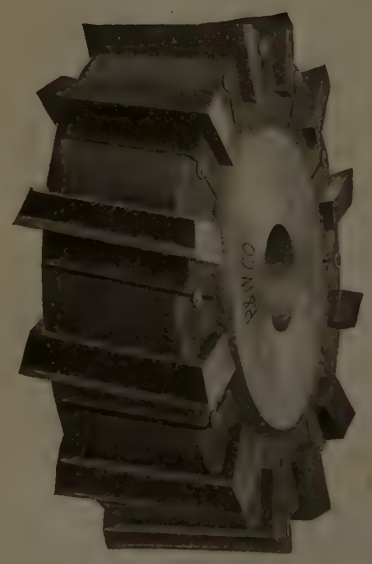

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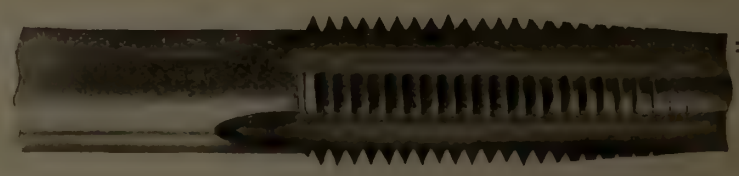

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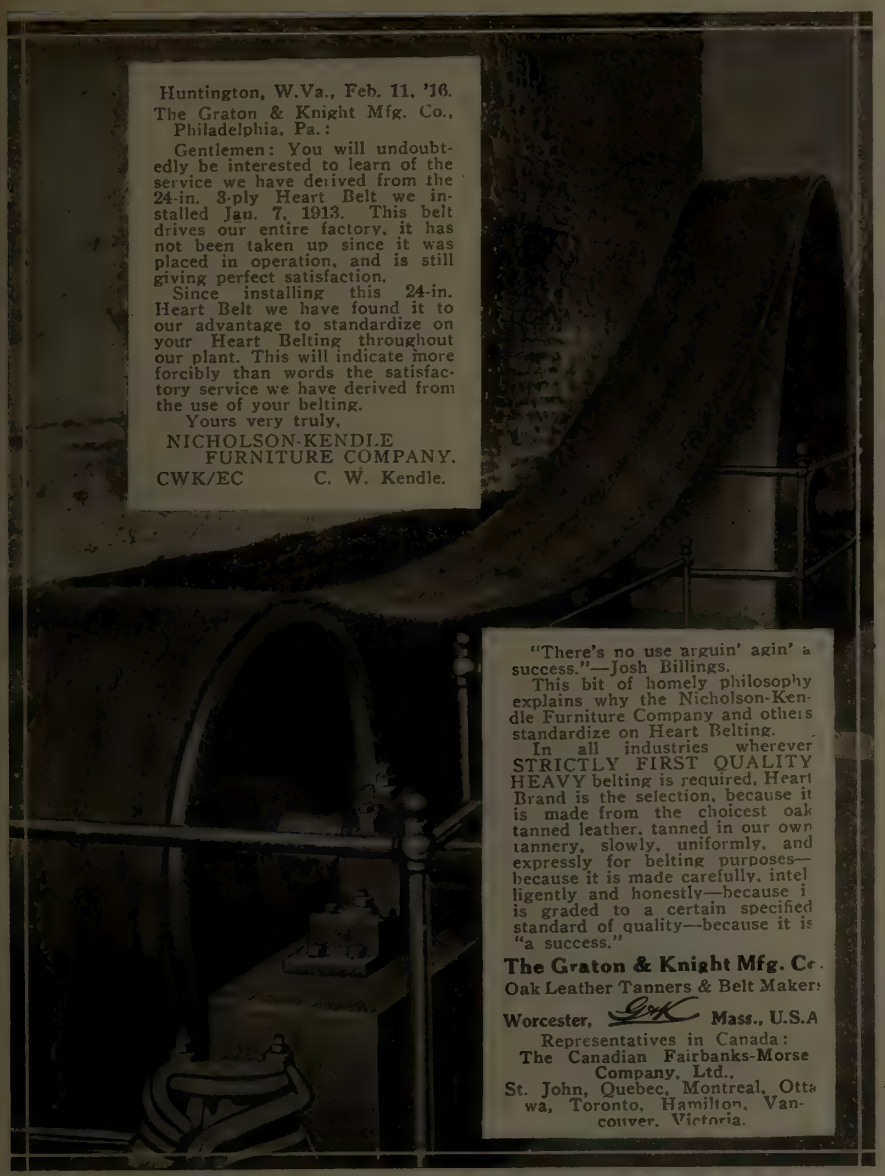

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And the success of this job in many a saw mill depends upon

Aloxite Saw Gumming Wheels

For the reason that they cut cool and clean and fast, even when forced to the limit—and they hold their shape—show long life.

There is nothing superior to Aloxite for steel grinding—it is hard, sharp and of just the right degree of toughness and Aloxite Saw Gumming wheels are

The Right Wheels in the Right Place

Suppose you let Carborundum service help you to better grinding service.

THE CARBORUNDUM COMPANY
NIAGARA FALLS, N. Y.

New York Chicago Philadelphia Pittsburgh Boston Cleveland
Cincinnati Grand Rapids Milwaukee Manchester, Eng.

SHINGLE & LATH MACHINERY
Dunbar Engine & Foundry Co.
Hamilton Company, William
Long Manufacturing Company, E.
Payette Company, P.
Fisher & Davis Mfg. Co.
Waterous Engine Works Company

SHINGLE MACHINES
Marsh & Henthorn, Limited.

SHIP MAULS
Canada Foundries & Forgings, Ltd.

SHOEPACKS
Gendron Penetang Shoepack Co.
P. T. Gendron Shoepack Company

SILENT CHAIN DRIVES
Canadian Link-Belt Company, Ltd.

SLEEPING ROBES
Smart Woods Limited

SMOKESTACKS
Marsh & Henthorn, Limited.

SNOW PLOWS
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SODA PULP PLANTS
Becker & Co.

SOUTHERN LUMBER
Gregertson Bros. Company

SOUTHERN PINE
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Cameron & Company
Chicago Lumber & Coal Company
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
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Mason, Gordon & Company
McLennan Lumber Company
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Blanchard Lumber Company
Boake Manufacturing Company.
Bourgouin, H.
British Columbia Mills, Timber & Trading Company
Brown Corporation
Canadian Box & Shook Mills
Cane & Company, J. G.
Davison Lumber Company
Donogh & Company, John
Fraser Limited
Fraser-Bryson Lumber Company
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Grant & Campbell
Hart & McDonagh
Lauder, Spears & Howland
Long Lumber Company
Mason, Gordon & Company
McLennan Lumber Company
New Ontario Colonization Company
Nicholson & Co., E. M.
Pembroke Lumber Company
River Ouelle Pulp & Lumber Co.
Spencer, C. A.
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Columbus Chain Company
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STEAM PLANT ACCESSORIES
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STEEL BARRELS
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STEEL DRUMS
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International Time Recording Co.

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Cant & Kemp
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VENEER MACHINERY
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Palmer Medical Company

WATER WHEELS
Hamilton Company, William
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WOOD DISTILLATION PLANTS
Blair, Campbell & McLean, Ltd.

WOODWORKING MACHINERY
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Canada Machinery Corporation
Elliot Woodworker, Limited
Jeffrey Manufacturing Company.
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Machinery Company of America
Preston Woodworking Machinery Co.
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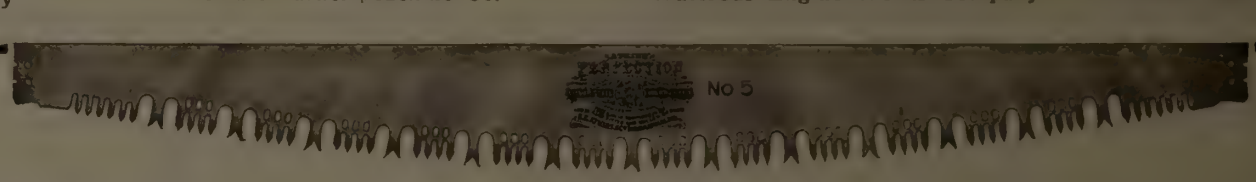
WOOD PULP
Austin & Nicholson
Becker & Co.
New Ontario Colonization Co.
River Ouelle Pulp & Lumber Co.

YELLOW PINE
Blanchard Lumber Company
Boake Manufacturing Company.
Crescent Lumber Company.



ATKINS

STERLING STEEL SAWS

Give the results you are looking for. They run easier, cut faster and are guaranteed to hold their edge longer than any other make of saw.

Each one is an investment that will bring large returns.

Try them and see—you'll not be disappointed.

Specify ATKINS on your next order — It means economy.

E. C. ATKINS & CO.

Factory: HAMILTON, ONT. **Branch: 109 Powell St., VANCOUVER**

J. J. TURNER & SONS

PETERBOROUGH, ONT.

Government Contractors and the largest Manufacturers and Dealers in Canada of

Lumbermen's Tents, Bed Ticks, Grey Blankets, Nose Bags, Waterproof Goods, Steel Ranges and General Camp Outfits.

Write for Catalogue. **Prompt shipments.**

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."

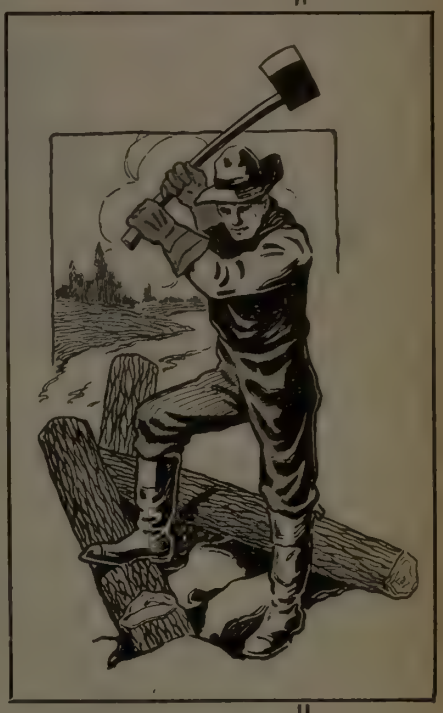
CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

Drafted for Service in the Lumber Camps

"ASBESTOL" Gloves and Mittens will serve the boys in the lumber camps as they serve their country.

Faithful in service and ready to meet any task to which a good work glove or mitten can be put.

"ASBESTOL" Gloves and Mittens are soft and pliable. Well made from the finest leather and can be depended upon for service in the coldest winter days.



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REG. IN U.S. PAT. OFF.
EISENDRATH'S CELEBRATED HORSE HIDE

Gloves & Mittens have no equal. There is nothing "just as good"

Eisendrath Glove Company
2001 Elston Ave. - - CHICAGO

LOGGING LOCOMOTIVES

Locomotives on trunk line railroads have the advantage of the best facilities for inspection and repairs.

Logging locomotives face different conditions. They must work day after day in the hardest service, and often in localities where repairs cannot be made without great inconvenience. That is why we build our logging locomotives from interchangeable stock parts. With this system every part must fit every other locomotive of the same size and design, and long delays waiting for duplicate parts are avoided. Interchangeable parts kept on hand at our Works for prompt shipment

MONTREAL LOCOMOTIVE WORKS, LIMITED,

DOMINION EXPRESS BUILDING, MONTREAL, CANADA.

This illustrates our **No. 5 PORTABLE SAW MILL,** just the thing to work up a small pocket of timber or for an out-of-the-way location.

IMMEDIATE DELIVERY

We have in stock a Right Hand Saw Frame and Carriage, also a set of track timbers, as shown in the above cut (except that they are the opposite hand). Other items in stock at Orillia include :---

No 1. Log Jack with foot wheel and idlers.
No 7. Log Jack " " "
10" x 36 ft. Steam Feed.
10" x 42 ft. Steam Feed—Either feed can be furnished with vertical or horizontal valves.
Double acting set works in No. 1, 2, and 3 sizes.

We also have a second-hand plain slide valve engine, right hand, side crank, 9x13, suitable for a small saw mill plant. This is a good bargain and can be shipped immediately.

The E. Long Manufacturing Co., Ltd.

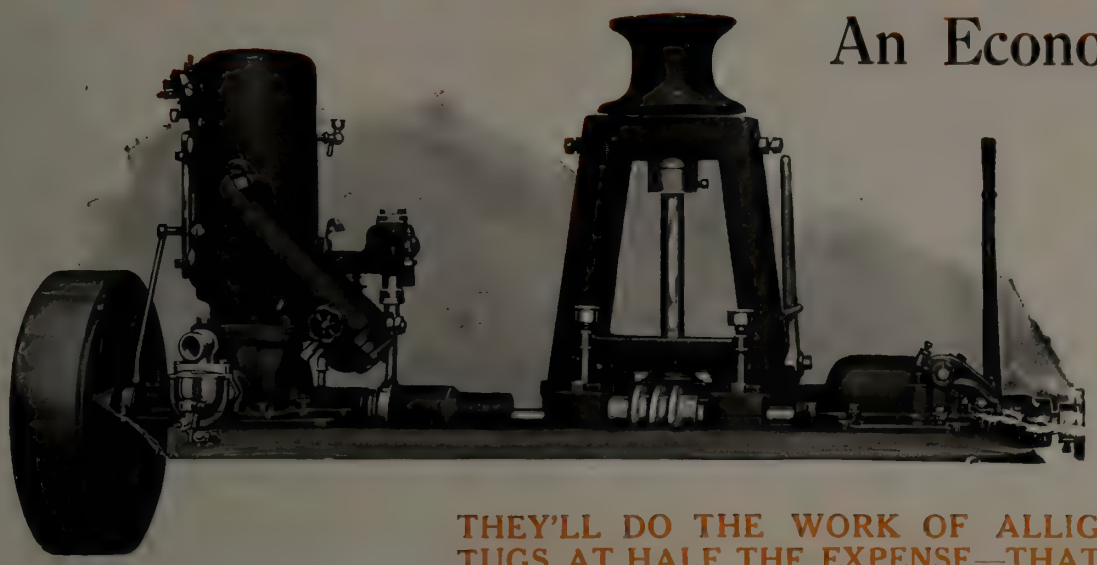
ORILLIA **CANADA**

Robt. Hamilton & Co., Vancouver
Gorman, Clancy & Grindley, Calgary and Edmonton

Stuart Machinery Co., Winnipeg
Williams & Wilson, Limited, Montreal

Adams Pointers

An Economy Combination



A rigid little craft with a powerful sturdy engine

THEY'LL DO THE WORK OF ALLIGATORS AND TUGS AT HALF THE EXPENSE—THAT'S ECONOMY

Adams Pointers have been chosen by leading lumber manufacturers and driving companies because of their superior construction and exceptional economical features.

It will indeed pay you to investigate the merits of this craft; also the remarkable engine which has been so instrumental in the success of Adams Pointers.

ADAMS ENGINE COMPANY, PENETANG, ONT.

J. T. PAYETTE, Prop.

128,350 Laths in 10 Hours--That's Service

This Lath-Mill and Bolter has beyond doubt demonstrated its worth,--service, durability and moderate maintenance cost; especially in the test cut, 128,350 4 ft. laths 1½ in. by ⅜ in., counted, tied and piled in ten hours.

The same dependable construction is embodied in all our other lines of Lath-Mill and Picket-Mill Machinery. Suitable for large and small concerns.

A Few of the "400" who use Payette's Lath-Machinery:

Graves, Bigwood Co., Byng Inlet, Ont.
Victoria Harbor Lumber Co., Victoria Harbor, Ont.
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Colonial Lumber Co., Pembroke, Ont.
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Wm. Milne & Sons, North Bay, Ont.
C. Beck Mfg. Co., Penetanguishene, Ont.
Manley Chew, Esq., Midland, Ont.
Chew Bros., Midland, Ont.
James Playfair Co., Midland, Ont.

P. PAYETTE COMPANY, Penetanguishene, Ont.

J. T. Payette, Proprietor

Your Profits

Where do they come from?

WELL, do you employ labor? Yes! Then there is just one source—your employees' labor.

Now—if your employees lose any of the time you pay for, the loss must come out of your net profits—not out of your raw material cost—not out of your factory burden—nor from any source but your Profits.

This must surely impress you with the vital importance of getting all the working time you buy, just as you insist on getting all the raw material you pay for.

If, say, 100 men in a factory lose only one minute each "arrival" and "departure" daily, it means 22 minutes per week, or 2200 minutes for these employees. This is 37 hours per week—at say 40c.—meaning lost time of $14.87 weekly or $770.00 in the year—out of your net profits. Pretty stiff price for doing without a time recording equipment—and we have not touched on production loss.

There is a modern and reliable method of mechanically checking each employee's time, which stops this leak. It is our business to stop "time leaks." In thousands of cases we have plugged them tight, by having the original Pay Roll Entry printed, and printed by the employee himself.

We make every kind of time recording device. WE MAKE THEM IN CANADA, saving you 25% to 42%, which is the duty on imported goods.

The International Time Recording Company of Canada, Limited

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Frank E. MUTTON, General Manager
270 Dundas St. West
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Toronto Phone—Col. 622.
VANCOUVER—R. Donohoe, 624 Birks Bldg.

MONTREAL
W. A. Wood, Jr., Sales Agent
Cartier Bldg., Cor McGill and Notre Dame Sts.
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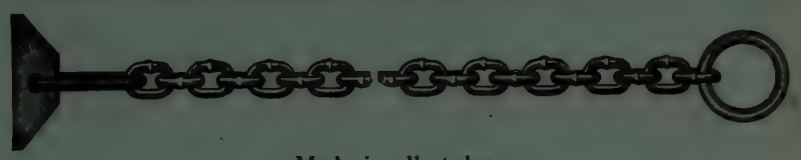
Canada Lumberman & Wood Worker

New **RAILS** Relaying
12 to 80 pounds per yard.

LOGGING CARS

Jno. J. Gartshore
58 Front St. West, Toronto



Made in all styles

Electric-Welded Boom Chain

We also specialize
Log Chains and "Dreadnaught" Loading Chain
Made in Canada Write to Fully Guaranteed
McKinnon Chain Co., St. Catharines, Ont.

Shimer Circular Bit Jointing Heads

A circular shear cut head that is unsurpassed as a Jointing Head for stock from 1″ to 3″; always ready for the job without a set up, saving you money, and assuring a perfect square joint. Made in four, six or eight bits with or without Self Centreing Colet.

Write for Prices

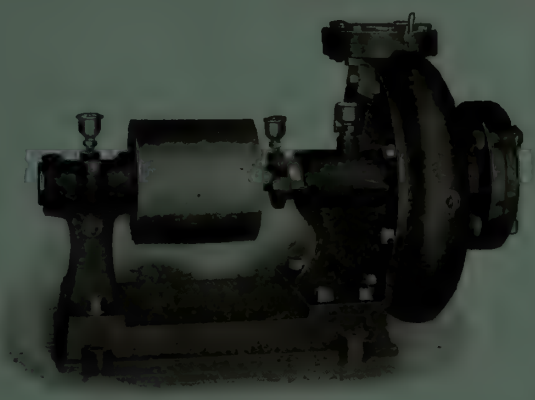
SHIMER CUTTER HEAD CO. OF CANADA, LTD., GALT, ONTARIO
Successors to Samuel J. Shimer & Sons

ASBESTOS

We manufacture practically every article that can be made of Asbestos—including

Asbestos { Packings, Boiler Gaskets, Pipe and Boiler Coverings

Atlas Asbestos Co., Limited, Montreal
(Formerly Turner Bros. Canada Limited)



PUMPS
for every Service
Ask for Catalogue
The
Smart-Turner
Machine Co., Ltd.
Hamilton, Canada

River Ouelle Pulp & Lumber Co.

Manufacturers of

SPRUCE

Lumber Lath Pulpwood

Head Office and Mills at:
St. Pacome, Que., Canada
On I. C. Ry. 75 Miles East of Quebec City
Also Mills at:
Crown Lake, Powerville Riv. Manie
On Nat. Transcontinental Ry.

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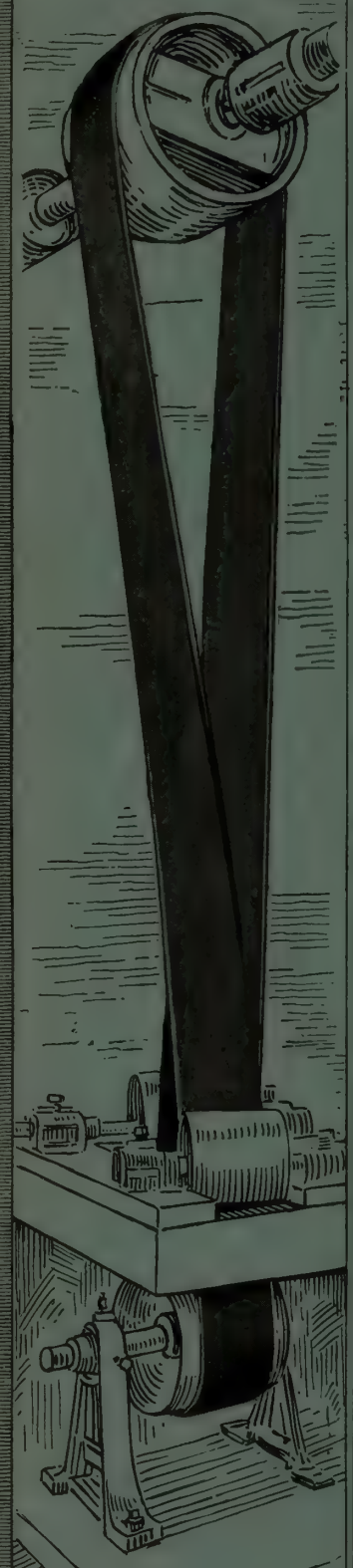
GRATON & KNIGHT

Standardized Series

LEATHER BELTING

Tanned by us for belting use



A Belting Catechism

What are the Advantages of Leather as belting?

Leather is the standard belting material. When properly tanned for belting, its surface will grip the pulley in the most effective manner. Good leather belting is economical and reliable. It will transmit power with 98 per cent. efficiency.

How can leather belting be made uniform?

The manufacturer must first set up definite standards of quality—and strictly adhere to them. As he cannot secure belting leather in the open market of uniform quality, he must tan his own hides. He must tan them in sufficient quantity to enable him to select for each belt, pieces up to his standard. These pieces must be uniform in weight, stretch, texture, and quality.

Why should belts be rigidly graded?

A belt is no stronger than its poorest part. The quality of leather varies, and unless each belt is carefully graded, dissimilar qualities get into the same belt. Rigid grading is uniformity. Grading should be done by expert judges of belt leather quality, according to fixed standards.

Why is there such confusion in leather belting grades?

Because many belt makers have not standardized their belts, but give the buyer any kind of belt he demands. The result is chaotic.

What *is* Standardized Leather Belting?

Simply belting that is standardized to meet the needs of the different classes of power transmission—instead of being made to meet theoretical specifications. Transmission requirements can be classified into a comparatively few groups, and there is a standardized belt to fit each one. Standardization **can** be applied to belting just as to any other type of machine part or product. It is common sense in belting.

How does Standardized Leather Belting help the belt buyer?

It insures the selection of the proper belt required to speed up machines, to maintain production, to reduce operating expenses, which cannot be accomplished unless the belt user gets the maximum power through his belts. Standardized leather belting effects this for him and enables him to **know** that he is getting the right brand for highest efficiency and greatest economy—maximum service from every belt and every drive.

How does it work?

Let a Graton & Knight representative make an analysis of your belting requirements. Then get the standardized belt for your work, ordering your belting by work to be done rather than by specification. There is no obligation—there may be a great saving for you.

The Graton & Knight Mfg. Company

Oak Leather Tanners and Makers of Leather Belting
WORCESTER, MASS. - - U. S. A.

Representatives for Canada:

THE CANADIAN FAIRBANKS-MORSE, CO., LIMITED

St. John, Toronto, Quebec, Hamilton, Montreal, Ottawa, Vancouver, Victoria

GRATON AND KNIGHT

14 in. Spartan Double Leather Belt on difficult quarter turn drive in large woodworking plant.

SPRUCE

1916 SAWING

Merchantable

2 x 4 x 10/16	-	33,368'	2 x 6 x 10/16	-	5,459'
2 x 5	-	22,704'	2 x 7 x 10/16	-	77,272'

1917 SAWING

Merchantable

1 x 3 x 10/16	-	128,360'	2 x 4 x 8/16	-	218,053'
1 x 4 "	-	286,212'	2 x 5 "	-	134,920'
1 x 5 "	-	80,514'	2 x 6 "	-	61,630'
1 x 6 "	-	30,004'	2 x 7 "	-	39,586'
1 x 7 and up	-	19,760'	2 x 8 "	-	16,360'
1 x 3 and up x 6/10		33,613'	2 x 9 and up	-	9,000'

Mill Culls

1 x 3 and up x 6/16 - 47,200' 2 x 4 and up x 6/16 - 62,500' 3 x 6 and up x 6/16 - 118,819'

Merchantable Spruce Lath 1½ x 4'—1,500,000 pieces

Bartram & Ball Limited

WHOLESALE LUMBER

Drummond Bldg., 511 St. Catherine St. West, Montreal, Que.

B.C. Fir Lumber and Timbers

Rough or Dressed

On account of the uncertainty of car and mill supply, we are offering only material that is in transit. We then know that we can deliver these cars when promised.

KNOX BROTHERS K B.C. FIR SPECIALISTS

Wire us your enquiries.

Cars Now in Transit:

Flooring
Ceiling
Rough Clear Fir, Kiln Dried
Ship-Decking
Timbers
Shingles
Tank Stock
Ship Timbers and Planking

KNOX BROTHERS, Drummond Building, 511 St. Catherine St., Montreal, Que.

VANCOUVER OFFICE: PACIFIC BLDG., VANCOUVER, B.C.

SPECIALISTS IN BRITISH COLUMBIA FOREST PRODUCTS

Sole representatives of The Victoria Lumber & Manufacturing Company, Ltd., in Eastern Ontario, Quebec and Maritime Provinces.

CHEMAINUS

CHEMAINUS FIR

Clear Kiln Dried B.C. Douglas Fir

We can make prompt shipment on straight or mixed cars of clear kiln dried B.C. Douglas Fir in all sizes rough or dressed. Also flooring, ceiling, mouldings and siding,

If quality can talk to you—get in touch with us.

VICTORIA LUMBER & MFG. CO., LIMITED

Head Office and Mill

CHEMAINUS, B. C.

Eastern Sales Office:

Traders Bank Bldg., TORONTO, Ont.

R. G. Chesbro, Rep.

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

MILL CULLS

500,000 1 x 10 & 12, No. 1 Mill Culls
200,000 1 x 10 & 12, " 2 " "
100,000 1 x 4 & up, " 1 " "

WRITE FOR PRICES

The Long Lumber Company
Hamilton
Ontario

Rubber Goods
FOR LUMBERMEN

Belting Our long experience in the making of Rubber Belts enables us to specialize on this line. "P.M.S.," "Special Drive" and "Lion" are our leading brands for power transmission.

Packings "Redstone" High Pressure Sheet Packing has proved by test that it will outlast any other similar packing on the market. We make Spiral and Ring Packings, etc., that are equally reliable.

Hose for Steam, Water, etc., in various grades, made especially to give satisfactory and economical service under different conditions.

Fire Hose One or more of our twenty brands of Fire Hose will be found, not only in the best equipped Factories, Mills, etc., but in almost every Fire Department in the Dominion.

Gutta Percha & Rubber, Limited

TORONTO MONTREAL WINNIPEG REGINA SASKATOON CALGARY EDMONTON VANCOUVER

George Gordon & Co.

Limited

Cache Bay - Ont.

Manufacturers of

RED and WHITE PINE

PLANING MILL DRY KILN

The Cheapest, Quickest— Most Reliable way to convey lumber away from saws and to and from cars.

Mathews Steel Ball Bearing Lumber Carrier will convey your product by Gravity at a grade of 4%. (½" fall per ft.)

Mathews Conveyor as used by Vancouver Lumber Co., at Roche Point, B. C.

Canadian Mathews Gravity Carrier Company, Limited

484 Richmond Street, West, TORONTO

F. N. Waldie, President. R. S. Waldie, Vice-President. W. E. Harper, Secretary.

The Victoria Harbor Lumber Co., Ltd.

Manufacturers of

Lumber, Lath and Shingles

Mills at Victoria Harbor, Ont.

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12-14 Wellington Street East, TORONTO, ONT.

Fraser Bryson Lumber Co., Ltd.

Office, Castle Building 53 Queen St. Ottawa, Can.

Wholesale Lumber Dealers and Selling Agents for

Fraser & Co.

Mills at

DESCHENES - - - QUEBEC

White Pine
Red Pine
Spruce
Lumber and Lath

Austin & Nicholson

CHAPLEAU, ONTARIO

Lumbermen and General Contractors

Railway Ties and Pulpwood
PILING
Rough and Dressed Lumber and Lath

MILLS AT NICHOLSON, ONTARIO

WHITE PINE
JACK PINE
SPRUCE
HEMLOCK
LATH
HARDWOODS

Special in Lath
32 in. Lath in Pine, Spruce and Hemlock

Vancouver Branch
625 Birks Bldg.
F. W. Gordon, Mgr.

T & G QUALITY BRAND
British Columbia Red Cedar Shingles

Terry & Gordon

Wholesale Lumber Merchants

Head Office
703 & 704 Confederation Life Bldg., TORONTO, ONT.
Phone Adelaide 187 and 188

Ontario Representatives of
The British Columbia Mills Timber & Trading Company
VANCOUVER, B. C.

Special!

N.B. White Cedar Shingles

13 Cars No. 1 (Cull)
12 Cars Extra No. 1
6 Cars Clear Walls

Very attractive prices will be quoted on the above for quick shipment.

Montreal, P.Q., Branch
23 La Patrie Bldg.
Leon Gagne, Jr., Mgr.

Watson & Todd Limited
OTTAWA

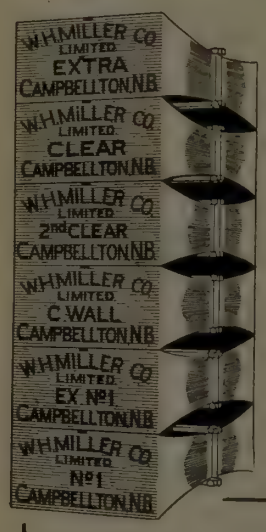
WHITE PINE
NORWAY

The
Harris Tie & Timber Co.
Ottawa - Canada

Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

Let us quote on your requirements for

Spruce and Pine Lumber



We manufacture and export all kinds of it.

WE ALSO MANUFACTURE

LATHS and TIES
PULPWOOD

Shipments by rail and water

Prompt--reliable--carefully handled

We Specialize in
New Brunswick White Cedar Shingles
LET US QUOTE YOU

W. H. Miller Co., Limited
Campbellton, N.B.

Facilities

WE HAVE THE FACILITIES for the efficient handling of Heavy Building and Bridge Timbers.

The illustration shows our Jumbo Planer for dressing big timbers.

Let us quote on your requirements.

The Boake Mfg. Co., Limited
TORONTO, ONT.

Crescent Lumber Company
Cincinnati, Ohio

YELLOW PINE

— *SPECIALTIES* —

TIMBER - DIMENSION - FINISH

Inquiries Solicited

EXCELSIOR LUMBER CO.
33 RICHMOND ST. WEST, TORONTO

OFFER

The following stock of **HEMLOCK**

to be drawn out and loaded last November and first part of December.

6,000 feet 2 x 6, 8 and 10 18/20 ft. Best Log Run Hemlock.		
9, 00 feet 2 x 10—16	"	"
9,000 feet 2 x 8—16	"	"
2,000 feet 2 x 6—16	"	"
3,500 feet 2 x 4—16	"	"
7,000 feet 2 x 10—14	"	"
7,000 feet 2 x 8—14	"	"
1,500 feet 2 x 6—14	"	"
3,000 feet 2 x 4—14	"	"
6,000 feet 2 x 10—12	"	"
8,000 feet 2 x 8—12	"	"
4,500 feet 2 x 6—12	"	"
8,000 feet 2 x 4—12	"	"
2,000 feet 2 x 10—8/10	"	"
2,500 feet 2 x 8—8/10	"	"
2,500 feet 2 x 6—8/10	"	"
13,000 feet 2 x 4—10	"	"
6,000 feet 2 x 4—6 9	"	"

Ready for Shipment

Hemlock in the best grades is our big specialty, and our Dry Stock can be shipped at once. We have the best facilities on the Georgian Bay.

Phone or wire us for quotations.

McGibbon Lumber Co.
Penetanguishene, Ont.

FOR SALE

1 car 8/4" Hard Maple, Log Run, Culls Out.
5 " 5/8" Spruce, Mill Culls
5 " 5/8" Spruce, No. 1.
4 " 4/4 Quebec Brown Ash, Log Run, Culls Out.
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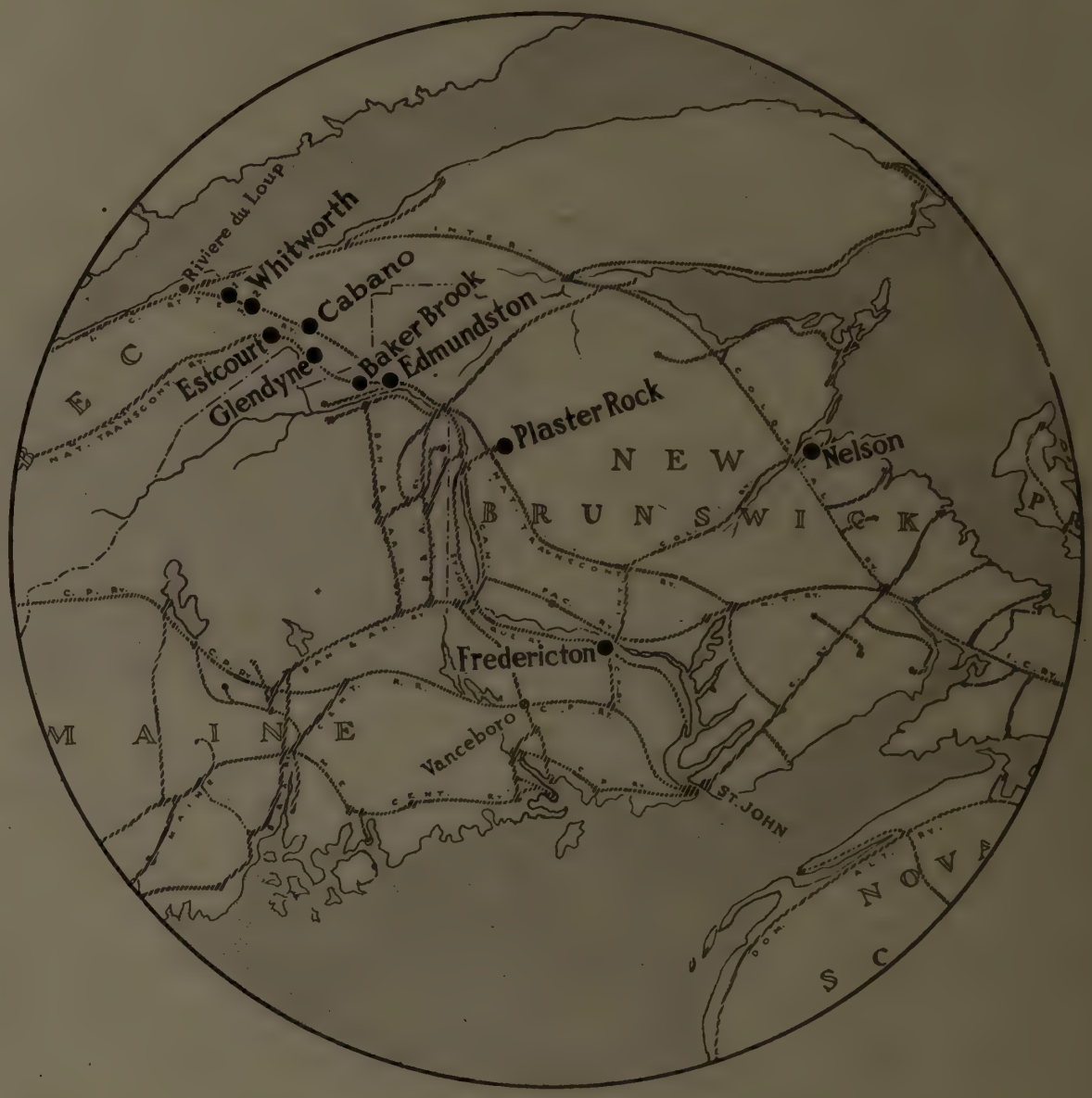

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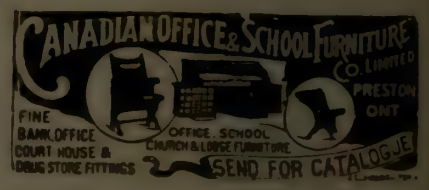

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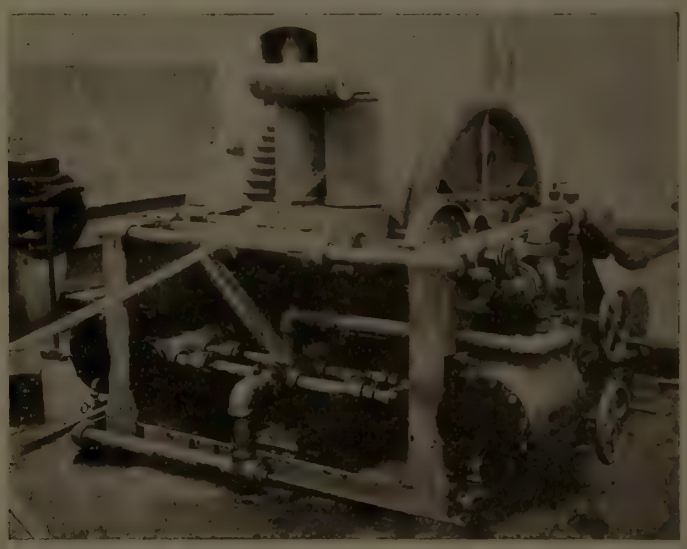

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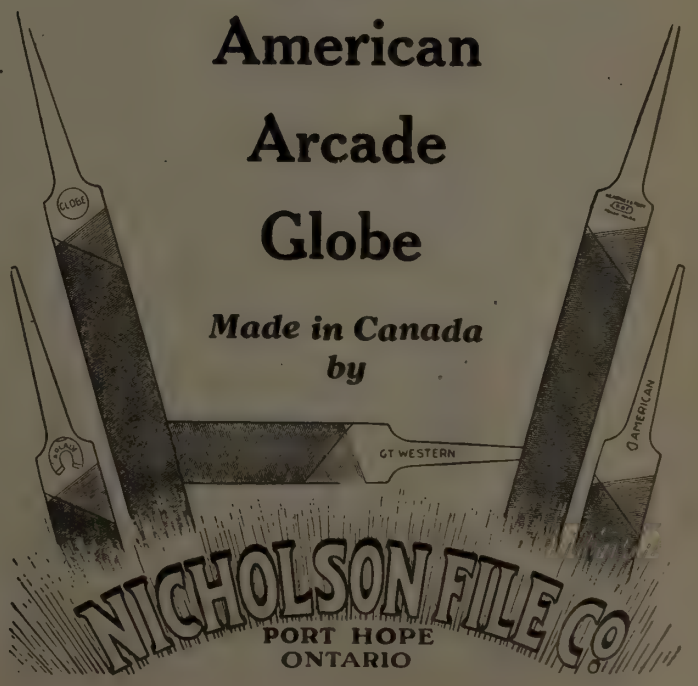

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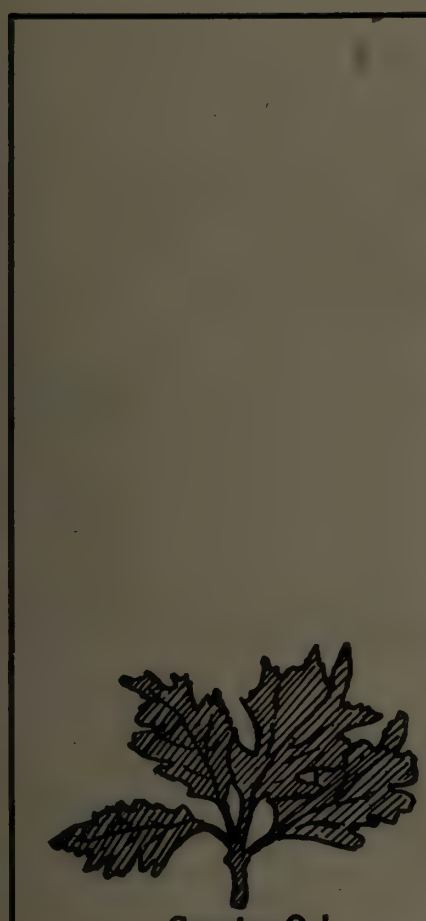

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Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

HUGH C. MACLEAN, LIMITED, Publishers

HUGH C. MacLEAN, Winnipeg, President.
THOS. S. YOUNG, Toronto, General Manager.

OFFICES AND BRANCHES:

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LONDON, ENG. - - - - - - - - - - 16 Regent Street, S.W.

TERMS OF SUBSCRIPTION

Canada, United States and Great Britain, $2.00 per year, in advance; other foreign countries embraced in the General Postal Union, $3.00.
Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster-General for Canada, for transmission as second-class matter.

Entered as second-class matter July 18th, 1914, at the Postoffice at Buffalo, N.Y., under the Act of Congress of March 3, 1879.

Vol. 37 Toronto, December 1, 1917 No. 23

Ontario Wholesalers Organizing

The proposal of the wholesale lumbermen of Toronto to form an association for the development of their mutual interests is one of the most important steps that have been taken by the trade. The manner in which the proposal has been taken up indicates that there is a necessity for an association and that it will be supported strongly. At the meeting held on November 16th to discuss the matter, the wholesalers of Toronto and manufacturers who carry on a carload trade were represented almost to a man, and a number of the larger firms had several representatives present. The discussion showed that there was a unanimous feeling in favor of organizing without delay, and a number of practical suggestions were made regarding the scope of the association's work.

It was urged by several of the speakers at the meeting that the association should not be confined to Toronto firms but should cover the whole province, and it is probable that this will be the nature of the association when it is formed. At the outset it may be that the composition of the association will be largely made up of Toronto firms, as they are so situated as to be able to do most of the preliminary work conveniently, but the success of such an association will depend greatly upon the extent of the co-operation secured from all parts of the province. Letters received from a number of the firms at other points already indicate that the co-operation of wholesalers generally can be expected.

There should be no need for arguing about the value of such an association, as the work done and the results secured by other associations both in Canada and the United States give sufficient indication of the benefits to be derived. At the Toronto meeting the speakers dwelt chiefly upon two features: the better understanding developed by organization, and the exchange of essential information regarding credits. There are, however, many other ways in which the usefulness of an aggressive wholesale lumbermen's association can be developed. In looking after matters relating to legislation, transportation, grading and inspection, terms of sale, etc., and in providing an official means of settling disputes between members of the lumber trade in general, there is a wide field of usefulness, and, as an association of this nature grows, numerous other methods of promoting the interests of its members will develop. It is, in short, only a matter of getting such an organization started with a representative and enthusiastic membership. The rest is a matter of utilizing the opportunities presented.

The foundation stone of an organization of this nature is confidence in one another. Without it there is nothing to be gained. With it, the boundaries of usefulness are almost unlimited. There is among the Ontario wholesalers today a much more fraternal spirit than was the case a few years ago. If any proof of this were needed it was afforded by the geniality and comradeship which prevailed at the meeting on November 16th. A pleasanter meeting could not have been devised, and it was clearly evident from the first that there already existed among the members of the trade that element of mutual esteem and friendliness that are essential to successful co-operation. The two chief speakers of the meeting were happily indicative of the broad scope of its possibilities and their addresses outlined both its practical possibilities and its social or personal advantages. Mr. A. E. Clark, chairman of the meeting, representing chiefly the hardwood trade, pointed out a number of ways in which the association would be of practical assistance to the trade, and Mr. A. C. Manbert, representing one of the most extensive firms dealing in softwoods chiefly, spoke both of the practical business side of the work and the social and friendly side. Mr. Manbert's remarks impressed forcibly upon those present the value of developing a feeling of friendly confidence and comradeship among wholesalers so that they might approach one another without hesitation in order to discuss the intimate and important features of their business, upon which so much of its success depends. Some years ago, when coming first to Toronto, Mr. Manbert, knowing of the valuable work done in United States cities by similar associations was disappointed in finding nothing of the same nature here, and his investigation of the trade at that time led him to the conclusion that there did not then exist a basis upon which to form one. Since that time, however, there has been a steady increase of good fellowship among the members of the trade in Ontario and there is now good reason to expect that such an organization can be made a success.

Good fellowship is the first essential of this proposition, but, by itself, will not keep an association together. Practical services for protection of credits and for dealing with transportation, legislation, etc., must be planned and put into effect from the outset. An association holding only a few meetings annually and an annual meeting and banquet might just as well not exist. Those who are taking an interest in the new proposition among the wholesalers are well convinced of this and are planning for an association of a distinctly business type, which will, in all probability, involve a fairly large membership fee, but will render in return services many times more valuable than the cost.

At an early date another meeting will be held, when a draft constitution and by-laws will be submitted by the committee appointed for this purpose, after which it is expected that actual organization will be effected.

Socks Wanted for Forestry Battalions

The Canadian Lumbermen's Association have received word that the men who have gone oversees from Canada in the various forestry battalions are in urgent need of socks, and the association is taking steps to relieve the want in this direction. The assistance of all lumbermen in Canada is requested. The president and executiive committee of the association, and the secretary of the Canadian Forestry Association discussed the matter thoroughly and decided to do everything they could to gather a sufficient number of socks to send over to the forestry battalions. The requirements of the battalions amount to 10,000 pairs of socks. The forestry battalions receive the regular issue of socks, but the conditions under which they work make it important that they should have a couple of extra pairs for each man.

The Canadian Lumbermen's Association has requested the Canada

Lumberman to give as much publicity to this matter as possible, and we are much pleased to be able to refer to it, feeling sure that the readers of the Canada Lumberman will respond readily and furnish the association with means to purchase an ample supply of socks to send forward at an early date. The forestry battalions are naturally of special interest to all lumbermen. Many of the officers and men enlisted in this work are known personally to our readers and the class of work they are doing in Great Britain and France is so closely similar to the operations of lumbermen in Canada that we feel sure that an appeal of this nature will find a ready response. The lumber industry has already done a great deal to furnish raw material for a large number of war requirements. Its record is indeed an enviable one and the forestry battalions which have gone overseas may be considered a personal representation of the Canadian lumber industry. We know that lumbermen in all parts of Canada have followed their work closely and taken a personal pride in the reports of the excellent results that have been obtained by these battalions. Had it not been for the ready response of these men to the call of Great Britain and France, our armies in the field would have been seriously handicapped by the want of suitable timbers for their engineering works, trenches, dugouts, etc.

The work of the forestry battalions is not of a striking or impressive nature. It is one of those quiet lines of activity going on far behind the lines, and sometimes quite close to the lines, upon which the life and progress of the army depend. It is, in fact, one of the most essential lines of work in connection with the progress of a modern army. The lumber industry of Canada can feel, therefore, that its representatives in the forestry battalion are playing an exceptionally important part in the successful carrying on of the war. The forestry service is thus one of the many non-combatant services which, combined with others, are going to win the war. Therefore, it is a definite duty on the part of lubmermen in Canada to see that these men are well looked after in regard to their personal comforts, and we feel sure that this duty will be readily accepted. It is not the idea to ask for any contribution of socks direct, but for money contributions only.

In order that the work may be done efficiently and satisfactorily to all who are interested, it has been decided that remittances may be made payable to the order of R. G. Cameron, Honorary Treasurer of the Canadian Lumbermen's Association, and addressed to him at Room 16, Castle Building, Ottawa. The Canadian Forestry Association is notifying all its members of the sock campaign, by means of notices in the Canadian Forestry Journal, and the publicity thus obtained, together with the efforts of the Canadian Lumbermen's Association are counted upon to produce sufficient subscriptions to obtain a large supply of socks at an early date.

We hope that readers of the Canada Lumberman will lose no time in doing their share of this important and patriotic work.

The Portable House Export Trade

In an editorial in the November 1st issue of the Canada Lumberman reference was made to the possibilities of the portable house trade with France, with a view to interesting Canadian firms which ought to share in this business. According to a letter received from a prominent business man, important orders for houses have lately been placed in the United States. Canadian firms have not obtained any such business.

With a view to getting closer at the facts of the situation, the Canada Lumberman recently interviewed Mr. Frank Pauze, of the U. Pauze & Son Company, Montreal. Mr. Pauze was a member of the special trade commission appointed in 1916 by the Canadian government to visit Great Britain, France and Italy in order to make enquiries and report upon the possibilities of developing trade between those countries and Canada. As a lumberman, he was interested particularly in the lumber side of the enquiry, and particularly in the question of supplying portable houses. To this end an exhibition of Canadian houses of various types was given in Paris.

Mr. Pauze states that the report of the commission was intended to be placed before a national convention of the various trades interested, to be called by Sir George Foster, but so far as he has learned, nothing has been done in this direction.

Mr. Pauze visited the devastated regions in France in order to investigate the possibilities of trade in portable houses. In this regard he says: "One of the principal questions is whether the people will be willing to go back to the towns and villages which have been ruined. There is no doubt that the French Government is convinced that the people will want to return, and if this be correct they will certainly require a large number of houses. For the moment, however, the subject is not a live one in France, owing to the many things connected with the war which occupy the mind of the government.

"Another vital question is that of transportation. How can we ship the houses with the present limited amount of tonnage at our disposal? This is a difficulty which will have to be faced in considering whether Canada can do business in this direction.

"I am also convinced that the French people will buy from outside sources only when it is apparent that they cannot build the houses themselves." Mr. Pauze is sceptical, to put it mildly, as to the orders which are alleged to have been placed in the United States. There might be individual cases of houses having been ordered, but he doubted whether the French government has given any such orders. He has been in correspondence with a large United States firm on the subject of shipping houses to France and the answer he received was that the firm were not ready to do anything in that branch of trade. Mr. Pauze added that the prices of houses submitted by the commission to the French government compared well with those for which houses could be made in France, but since that date freights had very largely increased.

On February 17th last Mr. Pauze received a letter from a French firm stating that the latter had taken up with their government the question of importing these houses. The government, however, were not willing to buy from foreign corporations, even those of the allies, owing to the necessity of reducing every possible form of import and also owing to the question of exchange. Still, the business should be borne in mind, because, after the war, the objections referred to would have to be waived. The firm asked for quotations for one thousand houses, but as delivery would have to be made in a French port Mr. Pauze said that it was out of the question to continue negotiations. In September he received letters from France reporting the unwillingness of the French government to take up the matter.

Mr. Pauze evidently believes that while there may be opportunities for this trade after the war the immediate outlook is not bright. So far as he is able to learn, no steps have been taken by our own government in the direction of Canada supplying France with houses in the near future.

Uniform Terms of Sale for U. S. Trade

Lumber manufacturers and wholesalers in the United States are taking much interest in a campaign for the adoption of definite and uniform terms of sale. The National Lumber Manufacturers' Association, through a special committee, has drawn up recommendations upon this subject and the association is asking all its affiliated associations to adopt the terms of sale that are recommended. The recommendation is being submitted to all the affiliated organizations, on the understandiing that when 75 per cent. of them have adopted the proposed terms, they will become effective. The new terms are as follows:—

"This invoice, after deducting freight, is payable net by 60 days' acceptance from date of invoice, such settlement to be mailed within

15 days from date of invoice. If the car has not arrived, 90 per cent. of the net amount of the invoice must be settled for in the form of acceptance less estimated freight, the balance of approximately 10 per cent. to be settled for net within five days after arrival of the car, when at the same time freight bill shall be sent in as voucher for the amount of freight; or a cash discount of 1 per cent. on the net amount of invoice after deducting the freight, provided remittance is made within 15 days after the date of the invoice."

It will be noted that the new terms make definite use of what is known as a "trade acceptance," a form of written acknowledgement of debt which can be converted at will into cash. Some of the points in favor of the seller having accounts closed by trade acceptance within five days after the arrival of the car are as follows:—

1. The correctness of the account is expressly admitted by the buyer; the transaction is completed, for the acceptance in the hands of an innocent third party is not subject to the legal defenses usually set up by debtors unwilling to pay.

2. Unearned discounts, unwarranted return of goods and other abuses will be materially lessened if not entirely removed.

3. Economy and convenience in collecting accounts will be gained.

4. Manifestly, more accounts will be paid when due and losses on bad accounts greatly reduced.

5. The dead capital in book accounts will be transformed into self-liquidating commercial paper convertible at will into cash.

6. The need for working capital will be lessened, and consequently the ratio of earnings to capital actually employed will be increased.

7. Petty abuses will be eliminated. The friction which so frequently grows out of the deduction of unearned discount is removed and the temptation to take a few days' extra time is eliminated. The prompt receipt of invoice covering a correct charge is acknowledged. The house which allows a customer to take extra time or an unearned discount discriminates against its better class of trade, who pay, as agreed. "Time is money" and the buyer has no better right to pay less than agreed, than the seller has to demand more.

Mr. Edward Hines, of Chicago, discussing this proposal at a recent meeting of the Northern Hemlock and Hardwood Manufacturers' Association, said:—"The changed conditions that have taken place in the lumber industry, with the added costs that enter the finished product, have made a decided difference in the price per thousand which this discount amounts to. Going back, for example, a matter of ten years, where the average price of lumber at the mill would be $10, 2 per cent. discount would amount to 20 cents per thousand. Today this can be safely based on at least 100 per cent. higher, or a $20 average, which, at 2 per cent. commission, means 40 cents; and on this basis a concern handling 50,000,000 feet a year, is charging off at the end of the year to profit and loss, $20,000, when at least half of this represents an amount wrongfully deducted. The question of cash discount, he said, is simply and purely interest allowed for the prepayment of an account before it is due, to give the seller the use of the money in the meantime.

"Within the past year or two the cost of lumber has advanced greatly, as has also the cost of supplies, and these things are sold to us net. The average time taken by the buyer of lumber is equivalent to practically $1 per thousand during the year, not counting the time and effort in correspondence between the buyer and seller in trying to collect the account."

The Merits of Wooden Ships

The extensive programme of wooden shipbuilding carried on in Canada and the United States, many interesting details of which were given in the November 15th issue of the Canada Lumberman, is naturally to be accounted for to a very great extent by the urgency of the demand for tonnage of all descriptions. The operations now in progress, however, are bringing out facts in connection with wooden shipbuilding which were formerly overlooked to a great extent and which suggest the possibility that the construction of wooden vessels will continue to be an important industry long after the war is over. Just at present, the allied governments require anything they can get in the way of tonnage that can be utilized for the carrying of supplies across the ocean. There is a limit to the quantity of steel vessels that can be constructed, and wooden ships are being called upon to supplement steel ships as far as possible. The most favorable feature of the wooden ship programme is the fact that it makes use of an entirely different line of materials and a different class of labor from those which are used for the construction of steel vessels, and therefore does not in any way interfere with the steel ship industry. Wooden ships are generally built in yards that are not equipped for and could not handle steel ship-construction.

When the United States was confronted with the problem of increasing its production of ships it naturally turned first of all to wooden ship construction, because at that time, every existing yard capable of building steel ships was fully supplied with orders and was having difficulty in securing steel. Since that time conditions have been improved in connection with steel ship construction, but the United States Shipping Board still needs every woooden ship it can obtain and therefore is encouraging the wooden ship industry to the greatest possible extent. The demand for steel for a great number of materials that are essential to the war has also made it important to supplement the use of steel by other materials wherever this can be done.

Wood was probably the first material used in ship construction, and its use has continued for this purpose ever since. Compared with steel it has the following advantages:—It is cheaper and easier to work with; properly treated it lasts much longer in salt water and is less easily damaged by contact with bottom; it can be sheathed or painted with copper which prevents fouling by sea growth, thus permitting wooden ships to remain out of dry dock for a much longer time than steel ships.

The chief disadvantage of wood is the fact that its strength is much less than steel and therefore its use is confined to a smaller type of vessel than those that can be constructed of steel. This has proved a controlling factor for larger ships and has resulted in their being all built of steel, although steel had also been extensively used in the field of the smaller vessels.

Even before the war, however, ships of smaller size were often built of wood in preference to steel because of the advantages already mentioned. Particularly in cases where ships are liable to touch bottom it has been found that wooden ships are more serviceable, because the wood yields slightly and does not puncture so readily. The experience of the New Cape Cod Canal in this matter is striking. In the first two years of its existence, two steel ships were sunk in the canal by touching bottom, while no wooden ships met with this difficulty, in spite of the fact that there were many more wooden ships passing through the canal than steel ones.

From the point of view of economy, the wooden ship costs less to build and generally somewhat more to operate per dead weight ton of carrying capacity, because of the greater weight of the ship, which means that the carrying capacity for the given size of ship is smaller when built of wood than when built of steel. The insurance rating on wooden vessels is higher than on steel vessels because of the greater fire risk and the fact that wood is not so strong a material as steel. On the other hand, if properly cared for, a wooden vessel should outlast a steel vessel in salt water. There are today wooden ships in service that are over fifty years old. The trouble from dry rot which has sometimes caused wooden ships to deteriorate rapidly can be overcome by proper design and care.

Wooden ship construction has not yet been standardized, but has been largely carried out by an old "rule of thumb" methods, but even under these conditions construction of wooden ships is cheaper than steel. It is reasonable to expect that the standardization of wooden ship construction will make important reductions in its cost. The factory made house has now proved an economical structure and the factory made or standardized wooden ship is something that may be looked forward to in the near future. Altogether the outlook for long continued popularity for the wooden vessel in the years that follow the conclusion of peace, is encouraging.

Wholesalers Decide Upon Organization

Important Meeting at Toronto Favors an Association for Promotion of Mutual Interests —To Include all the Province—Credit Bureau Proposed

A meeting of wholesale lumbermen was held at the National Club, Toronto, on November 16th, for the purpose of discussing the advisability of forming an association representing wholesale lumbermen and those manufacturers who engage in the carload trade. The meeting was the result of a decision reached at a recent meeting of the Lumbermen's Section of the Toronto Board of Trade, at which the subject was discussed in a preliminary manner and the conclusion reached that a general meeting should be held in order that the subject might be debated more thoroughly. The preparations for the dinner which preceeded the meeting were carried out by a committee consisting of Messrs. A. E. Clark, chairman, C. W. Wilkinson, A. E. Eckardt, J. L. Campbell and H. J. Terry, who made all the necessary arrangements and were responsible for the large attendance and the successful manner in which the meeting was conducted.

Mr. A. E. Clark occupied the chair and, after the dinner had been concluded, opened the business meeting by laying before the 38 wholesalers and manufacturers present the ideas which those who were chiefly interested in the proposal had in mind. It had been the desire of the wholesalers of Toronto and many of the wholesalers in other parts of Ontario, for some years past, he said, to bring about some sort of a union among the members of the trade. They felt that the lumbermen as a unit could do a great deal more for their mutual benefit than they could do individually. Wholesalers had many difficulties to contend with and by getting together they could deal with them far more effectively than individually. The very fact that the wholesaler was sometimes considered to be a species of parasite was an argument in favor of getting together. There was no question whatever about the status of the wholesaler. He was not a parasite by any means, but an important and necessary trade factor and a legitimate element of the business life of the community. He went into channels which the manufacturer had never entered and could not possibly enter. It was utterly impossible for the manufacturer to break up his stock into dozens of items and distribute them about the country as the wholesaler did. The wholesaler was really the assistant of the manufacturer in a great many respects, a fact which they all realized very definitely about the first of December or the first of January, when the manufacturers called upon them for financial help.

The wholesaler's value to the trade as a go-between when difficulties arose between the purchaser and the seller was also of much importance. In settling these disputes and often carrying the brunt of the burden for both parties, the wholesaler performed a valuable service to the industry and the trade. It was not right to refer to the wholesaler as a list carrier. He did not take the list of the manufacturer, and mark $2 more upon it, walk out and sell it and take the profit. The wholesale business required good head work and it was time for the wholesalers to get together, both in Toronto and in Ontario generally. The object in calling the meeting was to secure the opinions of all the wholesalers present upon this proposal. Details would be left entirely in the hands of those present to work out for themselves.

The advantages of association work had recently been demonstrated forcibly in the United States. The government had called upon certain classes of producers of spruce, mahogany and other woods for large quantities of stock to be used in airplane construction. Mr. Clark had had no idea that so much clear spruce could be produced as was produced as a result of organization. In the State of Michigan, also, there had been a cantonment to be built at Battle Creek. The Michigan association sent to Washington an undertaking to take care of the lumber purchasing end of the work. They placed the order on the market and bought 4,210,978 feet from the Wisconsin association, in addition to what they secured from their own members. The cost of doing this was about 7½c per thousand feet, and this was assessed against the members who got the order. Without organization, such prompt and extensive results would not have been possible.

Some of the Wholesaler's Problems

Wholesalers had to consider well the question of their future difficulties, particularly those which would develop after the war. These were problems which no single wholesaler could work out for himself, but which a body of whosalers could deal with effectively and with good expectation of obtaining results of definite value. The question of cost of production in 1918 was one which would puzzle any single wholesaler to answer. As an association they would be able to analyze these difficulties and deal with them much more successfully than as individuals. Questions relating to transportation were cropping up every day in connection with which associated effort would be effective, but individual effort of little avail. These included such matters as increased freight rates and weights of cars. The problem of car weights was probably one of the most serious matters they had to deal with and united efforts in this direction would bring results. Men who were handling spruce, pine and basswood knew that it was very difficult to get 45,000 feet of lumber into an ordinary freight car. What could any single wholesaler do in obtaining a better condition of affairs in this regard? Practically nothing. If 38 of them got together, however, they would be able to show the railways the true situation in a very short time. He did not think they would have to fight the railways, but only to show them facts in a conclusive manner, in order to get fair treatment. There were many other questions to take up; an important one being the question of credits. It was part of the wholesaler's business to distribute credits cautiously and carefully. If they had a properly organized credit system in operation before the end of the war, they would be able to take care of their credit problems better than when the great change took place after the conclusion of peace.

Mr. Clark, at the conclusion of his remarks, invited the others present to discuss the subject. Several short addresses were made in approval of the suggestion to form an association, among the speakers being Messrs. Frank Oliver, W. W. Carter, C. W. Wilkinson, and John Barry.

Definite Result from Co-operation

Mr. H. J. Terry drew attention to the fact that a recent example of the value of being associated had been furnished by the case of an order issued by one of the railway companies in Toronto in connection with the payment of freight charges. A rather exacting circular had been sent to the trade, and the representative of the railway company had been invited by the Lumbermen's Section of the Toronto Board of Trade to attend one of their meetings and discuss the matter before it should be taken before the Board of Railway Commissioners. The immediate result was that the order was withdrawn. The lumbermen would not have been able to obtain this favorable result if they had each protested singly. Moreover, by getting together socially they were able to break down any barriers of personal misunderstanding which might exist between them, and thus could make their business relations much more pleasant.

Mr. John Donogh spoke briefly of the advantages of co-operation and concluded by moving "that in the opinion of the meeting it would be to the advantage of the wholesale lumbermen to form an association for mutual protection." The motion was seconded by H. G. McDermid, of the Union Lumber Company, and carried unanimously.

Mr. Donogh's motion was not taken as an indication that the discussion should close, but as providing something concrete to discuss, and several others contributed good short addresses.

Mr. A. C. Manbert, of Graves, Bigwood & Company, expressed his conviction that it was a fine thing for the lumbermen to get together and to become acquainted with one another intimately. He was pleased to have an opportunity of acknowledging the fine courtesy which he had received from the wholesalers of Toronto ever since coming to the city. These courtesies did much to relieve the weight of business affairs. One of the finest things about getting together was the fact that it removed the chance for misunderstanding and brought about that measure of co-operation which was so essential a feature of present day business. When he had first come to Toronto he had felt a bit lonesome and at once had begun to look around for an association that would take the place of some of the fraternal friendships he had enjoyed elsewhere—an association where members could exchange views and discuss market conditions and other matters that were of interest to them—and he was sorry to find that there was no such organization. Organizations of this type had been of great advantage to him in his former business experiences and he made considerable enquiry to see if there was not some basis upon which to form one in Toronto. He found, however, that there did not seem to be such a basis at that time. Since then, he had continually felt that if they could get together in some such manner as he had known the wholesalers to get together in Buffalo, Cleveland, Detroit and other United States cities it would be a distinct advantage to them.

The finest thing accomplished by the associations of which he had experience was in producing that measure of comradeship and understanding which enabled one man to go to another and ask him without reserve for his opinion about this or that man's credit or responsibility, or about any of the daily features that entered into the conduct of their business affairs. He was pleased to say that he had been able to develop a peculiarly happy intimacy with some of the

members of the trade, which enabled him to go into their offices and discuss these matters. It was really refreshing when you felt that you could do that sort of thing, because this kind of co-operative effort was the keynote of successful business today.

Friendliness and Goodfellowship Promoted

Public sentiment was against combination, and people who got together to exploit the consumer were very rightly and properly frowned upon. On the other hand, it was in the interests of society and business generally that business should be conducted upon a safe basis that would lead to prosperity, and how could this be brought about unless everybody based his business operations upon intelligent methods, such as could be best developed in co-operation between fellow business men? He had never believed in combination in the matter of price fixing. Price fixing brought about its own evil results immediately, because, when people were able to get together and combine, the ability to make use of power of this kind was very seldom exercised discriminately. But it did seem to him that an association of the kind that was under discussion could be practically helpful in many ways; first, in developing that friendliness and frankness which would enable any one of them to ask a question fairly and expect a fair answer; second, in bringing about that candor that was so necessary in connection with the matter of credits, which was the rock upon which they were going to get some hard bumps during the next few years unless they were able to steer clear of it; and third, in enabling them to get definite information upon matters relating to purchases and sales. He wished particularly to emphasize the matter of credits. They should be especially definite upon this proposition and should be prepared to bring about something constructively useful.

If they did nothing else, however, but get together once a month, as they had on this occasion and find out who was who, and meet one another socially in good fellowship, the effort would be praiseworthy and entirely worth while.

Short speeches were then made by Messrs. J. L. Campbell, Frank Oliver and C. W. Wilkinson. Mr. Oliver suggested that they should enquire into the feasibility of obtaining club quarters and establishing themselves definitely in some place where they could meet together.

Mr. Clark thought it would be best, in the first place, to carry out the details of organization before discussing any of the other features of the work.

Mr. Manbert expressed the opinion that they should definitely appoint a committee to prepare a constitution and by-laws to be laid before them at a future meeting in two or four weeks' time and he suggested the names of Messrs. A. E. Clark, C. W. Wilkinson, H. J. Terry and A. E. Eckardt to compose the committee. Mr. W. T. Egan seconded the motion and it was carried.

Credit Bureau Possibilities

Mr. Manbert again spoke briefly, in order to impress upon those present the importance of the matter of credits. A short time ago, he said, he had been asked to meet several other wholesalers to discuss the question of forming a wholesalers' credit bureau which ultimately should have some relation to the wholesalers' organization or to the interests of the lumbermen generally. He suggested that Mr. A. E. Eckardt, who had been one of the chief members of this committee should make a report upon its work in order to acquaint those present with what had been done, so that if it developed to their interest they could act upon it.

Mr. A. E. Clark explained that the Canadian Lumbermen's Association, a short time ago, had considered a proposal to form a credit bureau and had decided that it would be well to work it out locally at first. It had been discussed pretty fully and the conclusion had been reached that it might be worked out in some way in connection with such an organization of wholesalers as was now proposed. Mr. Clark then called upon Mr. Eckardt to speak about the credit bureau matter.

Mr. A. E. Eckardt referred in the first place to a few recent cases in which the lumbermen would have been able to promote their interests effectively if they had been organized into an association. In connection with business assessments, for instance, he called attention to the fact that theatres were assessed at 25 per cent. and departmental stores at 35 per cent., whereas the assessment on lumbermen was 50 per cent. The reason for this was probably found in the fact that when this legislation was put upon the statute book, the lumbermen as a body were not consulted. If they had an organization such as was proposed, all the bills affecting their interests would be watched carefully when they came before the House. In connection with railway freight rates also they were urgently in need of united effort if their interests were to be preserved.

Referring to the credit bureau, Mr. Eckardt outlined the work of the retail credit bureau formed in Toronto a few years ago. For ten years previous to the formation of this Bureau the aggregate average losses of the members composing it had been about $17,000 annually. Since the formation of the Bureau, he believed he was safe in saying, the annual losses had been brought down to less than $2,000. This fact alone must be a great benefit to the wholesalers, as the retailers were just that much better customers when their losses were reduced.

Short speeches were delivered also by J. P. Johnson, who discussed the importance of establishing rules of inspection for lumber; H. A. Leak, A. Read, John A. McBean, R. G. Chesbro, Chas. Plant, P. J. McCormack and W. J. Hetherington, all of whom expressed their approval of the proposal.

At the suggestion of the chairman a list was obtained of the signatures of those present who would join in the formation of an association. The signatures obtained represented 23 firms. It is expected that the co-operation of the few remaining firms in the city will be readily obtained and that a number of firms in other parts of the province will also be eager to join.

Votes of thanks were passed to the chairman and to Mr. C. W. Wilkinson for securing the use of the Albany Club. The meeting then adjourned, it being understood that as soon as the committee on constitution and by-laws is able to report, another meeting will be held.

Will Woodsmen be Exempted?

Information received from many manufacturing points in Ontario emphasizes the great scarcity of labor now prevailing, and the high wages that are being paid. Unquestionably the output during the coming winter will be much reduced. Operators are anxious to learn whether their woodsmen will be exempted from conscription. Up to date there is no sign of the tribunals exempting bushmen because of the importance of their work from a military point of view.

It is quite probable that the heads of the large lumbering and paper manufacturing concerns in the Ottawa Valley district will apply either for exemption from the draft for some of their men or at least for an extension of time covering the winter bush operations for all those who are eligible to be called to the colors on December 10. This is made necessary by the acute shortage of labor. Unless this concession is made by the government and no steps are taken by the military authorities to oppose the applications for exemption to the local tribunals, it will mean a great reduction in the cut.

Could Furnish Unlimited Airplane Spruce

The urgency of the demand for airplane spruce for the Allies and the great efforts that are being made to secure a sufficient supply have brought to light the fact that while there is a plentiful supply of standing timber of this class in British Columbia there is a shortage of available manufactured stock. Getting the logs to the mills seems to be one of the chief difficulties. On this subject, Mr. W. E. Williams, Secretary of J. R. Morgan, Limited, Prince Rupert, B. C., writes as follows:—"We are operating on Graham Island, the largest of the Queen Charlotte Group, about 80 miles west of Prince Rupert, B.C. There is unlimited airplane spruce timber available, and we would be prepared upon two months' notice, to put any reasonable quantity of it into the water, Graham Island, up to from 3,000,000 feet to 10,000,000 feet per month. But the difficulty at the present time is that there are no large sea-going tugs available for towing these logs in Davis rafts from Graham Island to the coast mills. There are, however, suitable tugs in British Columbia, but these are owned and are operating in the vicinity of Vancouver, and are under contracts which render them unavailable to any private concern in Northern British Columbia. If the government will only give a contract over a period of one year, and step in and provide for the delivering of these logs to the various sawmills, the necessary airplane spruce lumber will be forthcoming.

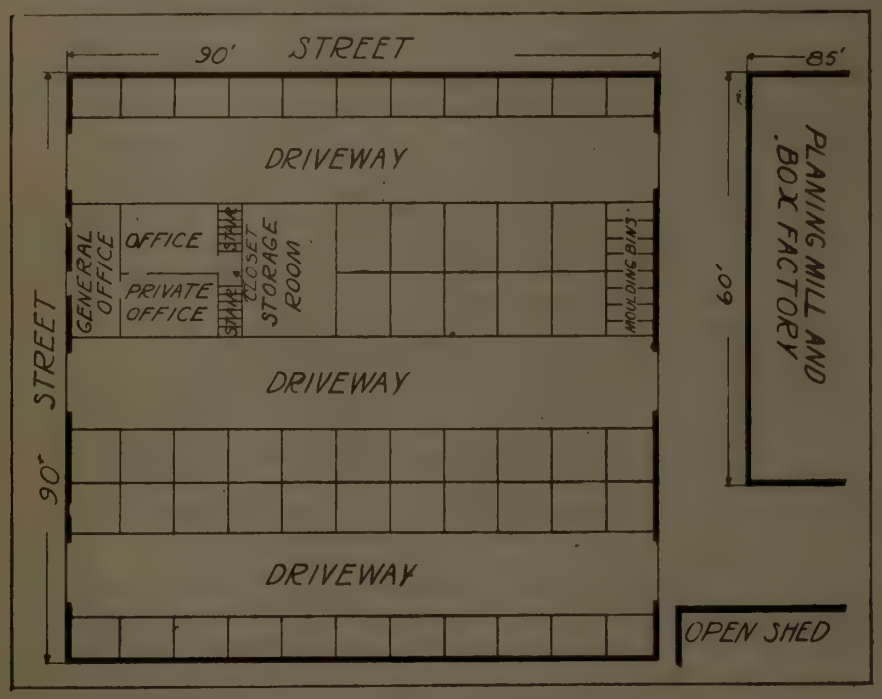
France Requests Offers from Manufacturers

United States Commercial Attache C. W. A. Veditz, of Paris, France, on September 15 transmitted a report to the Bureau of Foreign and Domestic Commerce at Washington in which he said that the French Minister of the Interior has decided to arrange immediately for the manufacture of numerous articles intended for the use of the population of those regions of France from which the enemy has recently been expelled. With this object in view, he has requested offers from manufacturers and dealers capable of furnishing the required goods. These competitive offers will then be examined and important purchases made on behalf of the government. Bids are asked for immediately for the manufacture of 20,000 wooden bed frames, in forty lots of 500 each, each manufacturer being allowed to bid upon five lots; for the manufacture of 10,000 school desks with seats, in twenty lots of 500 each, each manufacturer being permitted to bid on a maximum of five lots; for 10,000 cement sinks, with auxiliary parts. Further bids will be invited later for other lines of goods required by the population of the territory formerly invaded.

Modern Retail Storage Facilities

New Shed Erected by D. C. Baird at St. Marys, Ont., Provides for End Piling of Large Quantity of Stock

The planing mill and box factory operated by D. C. Baird at St. Marys, Ont., is well known to the wholesale lumbermen of the province. Mr. Baird is one of the most progressive retailers in Ontario and it is not surprising, therefore, that he has lately made improve-



ments in his equipment and facilities which are of the most modern type. The accompanying illustrations give an idea of the large lumber storage shed which Mr. Baird erected this summer. Retailers will be interested in a description of this shed.

The chief feature of the shed is the fact that it provides for end piling of lumber. By adopting this method of housing his stock, Mr. Baird claims that he is able to eliminate a great deal of waste of lumber, and also that it results in an important saving of time, as one man can handle practically as much lumber under this system as three men can handle otherwise. He also reports that he secures an extensive reduction in the cost of insurance. These three factors are of sufficient importance to attract any retail lumberman and to make it worth his while to look into the advantages of this method of storage.

The lumber storage shed erected by Mr. Baird is located at the corner of Church and Station Streets, St. Marys. It is 90 ft. x 90 ft., and adjoins the planing mill and box factory. The shed has a capacity of 500,000 feet of lumber. The outside walls are 18 feet high. All the frame work is built of 2-inch plank spiked together. Cement walls have been constructed under all the outside walls and cross walls. The outside of the building is finished with galvanized clapboard siding.

The shed is laid out with three driveways, each 14 feet wide, the entrance to which is at the main entrance to the shed. These driveways run through the whole length of the shed and on to the planing mill, so that lumber can be readily trucked into the mill. The driveways are on the same level as the plank flooring underneath the lumber piling spaces. The building is laid out in bents. Each piling space is 8 ft. wide and 7 ft. deep and there are a number of small bins for mouldings. Storage room is provided over the office for stocks of doors, sash, etc. The office is at the main entrance of the storage shed and is 20 ft. x 20 ft. It consists of a public office, private office and accountant's office, and is finished throughout in British Columbia fir, with panels of rotary cut fir, finished with an oak stain. The ceiling is finished in natural color. The office is heated by electricity.

New storage shed erected by D. C. Baird at St. Marys, Ont.

Planning Trade During Fall and Winter

In an issue of a farm paper I have happened to notice an advertisement put out by the Curtis Companies that is worth studying, says a writer in the American Lumberman. This concern has been a leader in advertising service and in helping the retailer give his customers what they have always wanted but have never been able to visualize. This full-page ad. was inserted to sell Curtis woodwork, but it was also intended to help the local retailer do the selling. But that is not the most interesting thing about the ad. The attractiveness and the honest directness are things the local board vender could study and imitate in his own newspaper publicity.

The whole page is of such a character that the casual reader in turning the pages would stop and look it over. At the top is a drawing of a house. This drawing is so made as to give a person a good idea of the size, style, and plan of the house, but the picture is a good deal more than the hard, repellent line drawing that architects seem to favor. There is atmosphere in it. There are flowers and shrubbery in the front lawn, and there is a background of trees and clouds that make a perfect setting for the house. The observer doesn't think of it as a house, but rather as a home. Then in the corners, on each side of this picture, are plans of the first and second floors. In a lower corner is a drawing of the living-room and dining-room, showing a fireplace and a colonnade and built-in bookcases. The furniture is in place, and the rooms have a lived-in appearance. The pictures prepare the reader for the opening statement: "We can help you build a better home." Following this the advertisement makes these statements: "Fear of costs keeps families from building beautiful, elegantly finished homes, with every comfort and convenience. Yet this fear of cost is largely due to lack of information, just as most all fears are. A request on a postal card will bring you a Home Book of Plans, absolutely free. From its pages you may select a comfortable, well-designed home, a home full of conveniences—yet a home costing no more than you want to spend." And so on.

"Notice how often the word "home" appears. This ad. is an appeal to people who want homes, and that is about all of us. It meets immediately the primary objection to building—that is, the prohibitive costs. Suppose some person with a latent desire to own a home, but who has always dismissed the idea as impracticable, happens to see this ad. He is interested. He says to himself that it will cost only a cent and a couple of minutes to get that book of plans. He obeys the impulse and thereby begins his education in the art of home-planning. The chances are good that, sooner or later, he will build a house, and when he does he will ask for Curtis woodwork.

I am not trying to boost the Curtis Companies. What I am doing is calling attention to an advertisement that has much of value to the local retailer in the way of ad. construction. Attraction by compelling illustrations and straight-forward statement and the promise of further help in planning a new house or a new interior—these are the things that give this bit of publicity its pulling power. After the person is interested enough to make enquiries it is up to the lumberman's salesmanship to complete the deal.

Pigs and Prosperity

This autumn season is a time of briskness, so they tell us. Sometimes it is and sometimes it isn't. Last night I heard a story of a Frenchman who was employed to cut some wood. He was a good axeman, but his axe had the usual vice of getting dull. He tried to sharpen it with a whetstone, a miserable task as every chopper of experience will testify. Finally he got provoked to speech, and among other things said: "The worst thing to have around the place is no grindstone." Just why this speech was attributd to a Frenchman instead of an Irishman we don't know unless perchance it really was said by a Frenchman. It has all the marks of a synthetic Irish story. Maybe the worst thing to have around the place is no grindstone, but we are entering as one of the worst the lack of briskness in a brisk season. However, other things being equal, this autumn weather has enough sparkle and kick in it to make the laziest of us sit up and sniff. Some of us will be out on the stubble-fields with the dogs, which will be good things for us and maybe not so extra hard on the birds either. Others will be pushing the business along a little harder. I saw a statement the other day to the effect that the best way to arrange the year's program of work was to do the big jobs in the spring and fall with some work and a dash of play in summer and a long, quiet time in winter, with plenty of reading and catching up with the thinkings and doings of the outside world. This fits the general pulsation of our business in the spring and fall, whether we want to or not.

It is up to us, then, to do a little extra shoving at this time. The general volume of business will improve, though by this time farmers

are pretty well through with their fall building. But what we lack in farm trade we will make up in that intensive building that comes in the fall and is hurried through in advance of winter. Most of the fall bills are sold, and have only to be delivered. The new business will be largely odds and ends, with maybe a house or two that came into the market because of a fire or a will. Among the odds and ends are a good many things of use to the customer and profit to the dealer. In the copy of the farm journal I mentioned before is a picture of a portable hog-house made for the raising of fall pigs. It may be a little late for these things, but the chances are good that those farmers who raise fall pigs and who have not supplied themselves with similar shelters will be interested. The same portage houses can be used in the spring. These houses are mounted on fir runners so they can be moved about easily. They measure 6 by 8 feet on the ground, have a gable roof, measure 2 feet in height, or more if desired, at the eaves, and have the roof arranged so that two sections that are hinged like doors will fold back and allow the sun to shine through a couple of window sash set just below them. These houses can be built for from $20 to $25. If treated with preservatives or kept well painted they should last for years. The design was made by the agricultural engineering and animal husbandry sections of the Iowa Experiment Station, and is described in its bulletin No. 152. The station may be addressed at Ames, Iowa.

Since these houses can be used in the spring, the building of them may serve as a winter occupation for the yard men. If the yard has some place that can be made comfortable to work in during the winter and will install a universal woodworking machine, a profitable little side line may be developed. Nearly any intelligent yard-man can learn to operate one of the machines, and, after he has made one or two of the houses, he would find it easy to put them together quite rapidly. Prudence would lead a retailer not to plunge on manufacture until he was rather sure of a comfortable margin of sales. They are subjected to exposure and more or less rough usage, so it might not be a bad advertising idea to treat the material, particularly the floor and the frame, with creosote oil. Then a couple of coats of paint would give the outside a finished appearance and would also contribute to their lasting qualities.

We all of us get engrossed in business sometimes until presently, if we don't let up and take an interest in something else, our families inform us that as a companion and playmate we are as successful as a fretful polekitty. We may say we are going to mix work and play as we go along, but the betting is good that at some time or other we have to let everything else go by the boards and sit up close to business. The slack time in winter is useful in getting reacquainted with the things we have had to pass up. It is a good time to get a new perspective on the town.

A Good Time to Read About Business

And then the winter is a good time to do some reading about business. There are good books on advertising and salesmanship and other phases of business. They can tell us about the fundamental principles of business; and some of these things will sound so plain and obvious that we will wonder why we hadn't thought of them ourselves. But, in any event, the man who is serious about his work will find time to read about it. He will not have to force himself to do this unless it be at first, when he is getting used to it. If he is really in earnest about his business he will find or make opportunity to read books that will fit him to do it better.

And now, especially, is the time to plan about the stuff we are going to induce our customers to read. Winter is the time for lumbermen to get busy with their educational advertising. It is a shallow view of advertising that regards it as being of value merely announcing to the public that we have in a new car of shingles. Nobody cares whether we have a car of shingles or not. But they do care very much when they are shown how to put on a roof tha will last a long time. They probably know we carry lumber, lime, and cement, so we can't tell them anything new along that line. But they are not convinced that they themselves can afford new barns. The best argument in such a case is no argument at all. The clever salesmen allows the goods to sell themselves. After the customer has had the desire for a thing planted in his mind the salesman can go over the arguments that show how he can afford it. So a goodly part of the winter's advertising ought to be directed toward showing people desirable goods. One dealer I know does this by means of plan books he has prepared. It can be done in other ways. But it is important that the customers be thinking of building. You may be sure that your catalogue rivals are not letting the winter go by unused. If by a consistent campaign—even a modest one—conducted through the newspapers you can induce some people to remodel or to build new houses or barns, the campaign will have proved itself worth while. And there is an odd angle about this matter; a good many men who have thought over their businesses for the purpose of finding advertising talking points have by that very thinking gotten more familiar with their own trade, and have worked out changes that have meant profit and increased service.

Lumberman's Sons Serving the Empire

The accompanying portraits show two of the sons of Chas. McGibbon, Penetanguishene, Ont., well known as the head of the McGibbon Lumber Company. The elder of the two sons, Lieut. Finlay

Lieut. Finlay T. McGibbon, 224th Forestry Battalion.

Lieut. John A. McGibbon, 2nd Canadian Division.

T. McGibbon, is with the 224th Forestry Battalion. He was educated in a commercial school at Toronto and subsequently was engaged in the company's office in Penetanguishene until 1911, when he went to Vancouver, B.C., and formed the McGibbon-Hodgson Lumber Company, which was engaged in the retail lumber and builders' supplies business. In June, 1916, he enlisted at Vancouver with the Pioneers, on his arrival in England was transferred to the 224th Forestry Battalion. Lieut. McGibbon has been in charge of operations at Bagshot, Surrey, England. The timber at Bagshot has now been cut out and Lieut. McGibbon has been sent over with his men to carry on lumbering operations in France.

Lieut. John A. McGibbon was born at Penetanguishene in 1889. He went in for the study of law and passed his final examination in May, 1916. Then he enlisted and soon was ordered to proceed overseas. After a period of training at Shorncliffe, he was sent to France in November, 1916. Subsequently Lieut. John A. McGibbon was sent to a military school and finally was transferred to the second Canadian Division, with which he is now serving.

Slash Disposal an Important Problem

The Spanish River Pulp and Paper Mills, Ltd., in a letter to the Canada Lumberman under recent date, express their appreciation of the opinions given by Mr. R. O. Sweezey in an article published in the September 15 issue of the Canada Lumberman on the subject of "Slash Disposal."

"The subject is of considerable importance," they say, "and we think that Mr. Sweezey has treated it very well. We thoroughly agree with most of his remarks, which seem to us to be framed with the idea of bringing the practical lumberman's experience gradually into line with the more theoretical views of those educated at a forestry school.

"Above all, we appreciate Mr. Sweezey's references to the necessity for approaching the matter under discussion with great care, in order that the lumber industry may not be crushed with the burden of expensive fire protection.

"The opinions of men of such undoubted experience as that of Mr. Sweezey should be listened to with respect by all who are initially concerned about it, or who regard the question of forest protection in a rather more academic light than the average lumberman does."

Rate Advance Case Again up in U. S.

The 15 per cent. rate advance case is on again in full blast in the United States. Hearings have been begun before the Interstate Commerce Commission in the reopened case. Leading railroad presidents have been giving evidence; representatives of some of the most important shipping interests in the country were also on hand to controvert the railroadmen's propositions and to make a fight against a general 15 per cent. rate increase.

While the first hearing was in behalf of the Eastern railroads, who are the prime movers in this case, there is a general belief that Western and Southern roads will get in line for a similar advance in their rates.

Lieut. Col. A. T. Thomson, D.S.O. and M.C., Port Credit, Ont., has been killed in action. Lieut. Col. Thomson was a well-known dealer in lumber and flour and feed at Port Credit, Ont.

R. S. Kellogg Addresses B. C. Shingle Men

At a recent meeting of the shingle manufacturers of British Columbia, held at Vancouver, B.C., Mr. R. S. Kellogg, of Chicago, secretary of the National Lumber Manufacturers' Association, J. S. Williams, of Seattle, secretary of the shingle branch of the West Coast Lumbermen's Association, and C. P. Constantine, of the Constantine Advertising Company, Seattle, were present to confer on matters of interest to the British Columbia industry.

Mr. Kellogg, in an address to the members present, referred to the great trade extension propaganda now being carried on by the National Lumber Manufacturers' Association. This organization is composed of many asociations, all of which are interested in various lines fo forest products. It has no individual members except as they were affiliated with the various associations composing its membership. The organization does not take up the cudgels in favor of any particular class of wood, but covers the whole field of the general use of wood in the thousand and one forms for which it is so well suited. Under the direction of its Chicago office, a large number of publications, written by thoroughly competent engineers and in very practical form have been issued dealing with the subject of wood construction in various phases in a fair and impartial manner. The high standard of these publications would be understood when it is stated that they were now extensively used as text books in various colleges and universities throughout the continent.

Mr. Kellogg spoke also at considerable length of the anti-shingle legislation which has advanced to a great extent in the United States, his remarks showing the comprehensive manner in which his association has taken up the subject. Through its organization, data had been secured covering 70,000 fires in various parts of the United States, and their cause. This information proved conclusively that only a small percentage of these fires could have possibly been charged to the use of wooden shingles. In the course of the investigation it was ascertained that in 60 per cent. of the cases the fires were really the result of carelessness.

The National Associaition is now working in conjunction with the National Paint Association, and hope before long to have a formula which can be given out to all paint manufacturers by the paint association, for a small royalty. This would do much to counteract the efforts of the substitute roofing men, whose product is really not as fireproof as untreated red cedar shingles.

Secretary Williams talked along the same lines and emphasized his points by statistics showing the inroads being made on the shingle industry by the agitation against the use of wood in building.

Comparative Figures of Shingle Costs and Prices

An interesting statement showing the comparative costs of the manufacture of shingles during corresponding periods in 1916 and 1917 has been prepared by Secretary F. L. Nash of the Shingle Agency of British Columbia. The statement is as follows:

Current prices of various items that enter into the cost of production of red cedar shingles and comparative prices of same in 1916, together with the percentage of increase. (Prices are f.o.b. Vancouver, B.C.)

	1916.	1917.	P.C. Increase over 1916.
Shingle logs—Average price per M.	$12.00	$14.50	21
Shingle bolts—Price per cord	6.00	8.50	42
Shingle bands (Acme galv. bands)—Per lb.	.08½	.17	100
Band nails, per cwt.	6.65	8.50	20
Shingle saws (42-in. shingle saw taken as av.)	39.000	71.50	83
Belting (8-in., 5-ply rubber taken as av.) per ft.	.85	1.19	40
Lubricating oil (heavy red engine oil taken as an av., containers included)—Per gal.	.27½	.34½	26
Labor—Sawing, per M.	.14	.20	43
Packing, per M.	.08½	.12½	47

Other labor advanced in proportion.

Comparative prices received for red cedar shingles, with percentage of increase, prices f.o.b. mill to the trade, are as follows:

	1916.	1917.	P.C. Increase over 1916.
Perfections	$2.90	$4.20	45
Eurekas	2.70	3.30	22
XXXXX	2.45	3.30	34
XXX	2.15	2.80	30

Airplane Spruce will Help to Win the War

The survey of the forest resources of British Columbia, upon which the Canadian Commission of Conservation has been engaged for the past four years, has proved of striking immediate value in the prosecution of the war. The Imperial Munitions Board, which has definitely taken in hand the organization of airplane manufacture, found itself in immediate need of large quantities of airplane spruce, and the Commission was able, as a result of its survey, to furnish the Board with specific information as to the location and ownership of all the large bodies of spruce in British Columbia suitable for that purpose. The fact that this information had previously been collected enabled the Munitions Board to take up without delay the matter of securing the necessary supplies of this vitally important material. Steps are being taken to increase the production of airplane spruce beyond all limits previously thought possible. This is an example of the vital importance of Canada's natural resources in winning the war. Many experts hold that the best prospect for definitely and overwhelmingly maintaining the supremacy of the allies is in connection with the war in the air. This involves the manufacture of many thousands of airplanes, toward which the most intense efforts of the allies are being directed. The most suitable species of wood for this purpose is Sitka or silver spruce, of which great quantities are to be found on the Pacific Coast of North America. Canada's share of this timber is very large, and is considered so important in the prosecution of the war that its export, except under license, has recently been prohibited by the government to all destinations abroad other than the United Kingdom, British possessions and protectorates.

Confer on Knock-Down Houses

The United States Government will soon contract for 300,000,000 feet of Southern pine for the building of knock-down houses for the use of troops in France. A general conference of lumbermen was held at New Orleans, La., recently, at the invitation of the Southern Pine Emergency Bureau for the purpose of discussing this project. Plans prepared by the War Department architects were submitted. The plans provide for houses built in panels that can be shipped knocked down and can be bolted together by the soldiers. The manufacturers present thought this could be done best by co-operation between manufacturers and contractors. The manufacturers did not feel that they could do the construction work to good advantage. They also suggested certain changes in the specifications that would allow the use of stock of standard sizes. Labor is unobtainable in Europe, and this is the reason the War Department favors the knock-down house. A committee was appointed to work out the technical difficulties. This committee consists of C. D. Johnson, St. Louis, chairman; C. A. Buchner, Millville, La., and H. L. Demuth, of Bogalusa, La.

U.S. Taxing Log Freight Bills

A three per cent. tax will be collected by the United States Commissioner of Internal Revenues on all shipments of logs on every logging railroad in the United States, regardless of whether or not these railroads have ever filed tariffs on such shipments, and regardless of whether or not they are public carriers or merely plant utilities. This information has been received from the Commissioner of Internal Revenue at Washington, D.C. The law provides that in case tariffs for those railroads are not on file, the Commissioner of Internal Revenue shall base his tax collections on rates filed by other roads which furnish similar service.

The Commissioner also advises that the three per cent. tax on bills of lading for forest products will be collected at destination on all shipments sent collect.

What Becomes of the Shell Boxes?

It is often asked what becomes of the hundreds of thousands of wooden boxes sent from this country and from Great Britain to the front. Many of the boxes are made of the highest grades of lumber, and it is not infrequently suggested that they are burned or turned to some useful account in the trenches. A light is thrown on the subject in a report of the Select Committee of National Expenditure, just issued in Great Britain. It is stated that there is in France and at a British port an immense accumulation of used brass shell cases and wooden shell boxes to the value of several millions of pounds. Adequate arrangements have not been made for the return and re-use of these boxes, and meantime the manufacture of new brass cases and wooden boxes proceeds.

Special Facilities for Cables Overseas

Special facilities are announced officially for week-end cable letters at cheap rates to or from Canadian soldiers, sailors, and nurses on overseas service. The letters must be of a social character, and can be cabled at 5 cents a word to or from Ontario.

Pulpwood Supplies in Quebec

In a recent report to the Royal Dominions Commission, Mr. Elwood Wilson, forester of the Laurentide Paper Company, deals with important features regarding pulpwood supplies in Quebec.

The total timber area of Quebec north of the St. Lawrence, the principal pulpwood area, is given as 303,855 square miles. Of this, however, only 147,247 square miles, or less than 50 per cent., is accessible by water and rail; the balance "will not be accessible until railroads are built in the far North."

The whole area can be divided into six watersheds, as follows:

	Square miles.
James Bay watershed	73,745
Ottawa watershed	37,166
St. Lawrence watershed	104,806
St. Maurice watershed	15,925
Saguenay watershed	35,157
Height of Land, east of Lake St. John watershed, to boundary	37,056

Mr. Wilson also distributes the area to the various forest types. It appears that of the 147,247 square miles of available mileage only 69,118, or 48 per cent., are really timbered.

The better class, Middle St. Lawrence type, being represented by 42,780 square miles, or nearly two-thirds, its large cordage of possibly 10, and probably 8, cords per acre, brings the average to 8.2 to 6.2, although in the other types the product runs mostly only between 5 and 3 cords.

In the St. Maurice Valley the average on timbered area is stated as 6.75 cords, the best 8.6 cords, and the average over all 3.3 cords, with a percentage of balsam which runs from 48 to 78 per cent. in different localities.

The valley of the St. Maurice River contains about 12,329 square miles, and has all of the timber types of the province except the "Northern Subarctic." The area may be divided as follows:

	Square miles.
Water	758
Merchantable timber	5,091
Lumbered	1,603
Swamp, not timbered	52
Burnt, reproducing spruce and balsam	2,873
Burnt, reproducing jack pine	656
Burnt, not reproducing	652
Settled	644
	12,329

Practically all of the timber is accessible, but there are some areas which cannot be lumbered profitably at present. Mr. Wilson estimates the total stand of timber at 10 cords per acre over the "merchantable" area, giving 32,582,400 cords, and on the cut-over areas at 5 cords per acre, 5,129,600 cords, or a total of 37,712,000 cords. This is made up as follows:

	Cords.
Balsam	24,211,040
Black spruce	7,617,824
White spruce	5,883,072

The spruce timber is generally sound, but about 10 per cent. must be deducted for rotten balsam, which would reduce the cordage to 35,290,832 cords.

The cut in 1915 in this section was above 400,000 cords, an increase in the last five years of 28 per cent. per annum. If only a 10 per cent. increase of cut is anticipated for the future, the standing timber will be exhausted in fifty years, not counting loss by fire. "There is not sufficient timber left under the diameter limit set by the government to produce within thirty years more than three to five cords per acre, and the figure is nearer three cords than five. The growth on the area lumbered each year from now on will not be sufficient to take care of the increased cut."

Not much hope is held out for a reproduction of the soft woods, except balsam, under present methods. Several tracts are cited which were burned fifty years ago on which there is to this day no reproduction of spruce or balsam, except a few scattered trees.

The Three Rivers Shipyards, Ltd., has been incorporated at Ottawa, with a capital of $49,000, to build ships of all kinds at Three Rivers, P.Q. The incorporators are T. M. Kirkwood, of Toronto and Chouinard, and L. Hayman, of Montreal.

How a Canadian Forester Feels in Egypt

"Well, I wish the war would hurry up and finish. I'm tired of the sun and glare and homesick for the dark green depths of a trail right up in the jack pine, and a bit of a lake with trout in it."

Personal and Miscellaneous

Mr. A. E. Gordon, of the firm of Terry and Gordon, wholesale lumber dealers, Toronto, is on a business trip to British Columbia. He expects to be absent about six weeks.

Mr. F. N. McCrea, of Sherbrooke, the well-known lumberman, has accepted an invitation to become again the candidate for Sherbrooke County, P.Q. He is a supporter of Sir Wilfrid Laurier.

Messrs. Walter and Charles McNeil are erecting wooden vessels along the East River, in New Glasgow, N.S. The vessels will be of different sizes, one a fairly large one and the other of a smaller capacity.

Mr. Charles Power, son of Mr. W. M. Power, Quebec, has been chosen Liberal candidate for the new division of Quebec South. He has served at the front, obtained the Military Cross, and was invalided home. Mr. Power is an anti-conscriptionist.

Col. J. B. White, in addressing a meeting of the Montreal Soldiers' Wives League, recently, described the work done by the Canadian Forestry Battalion in France. He especially thanked the League for the presents of socks, as one of the great problems of the men in France was to keep warm.

Two lumbermen will contest the united counties of Richmond and Wolfe, P.Q. Mr. E. W. Tobin, of Bromptonville, the present Liberal member, will oppose Mr. M. George Crombie, of Richmond, the senior partner of the firm of Williamson and Crombie, lumber manufacturers, Kingsbury, P.Q., who has been selected as Unionist candidate.

Mr. J. A. Bothwell, manager of the Brompton Pulp and Paper Company, East Angus, P.Q., has declined an invitation to contest Compton County as the Win-the-war candidate. Mr. Bothwell took the ground that, as the head of a company employing many men producing for the country's needs, his best work can be done in his present position.

Concrete shipbuilding has begun in Montreal, under auspices which are likely to bring it to a successful issue, if the scheme proves at all practicable. The work of construction is being carried out by the Atlas Construction Company, which has had a great deal of experience in the handling of cement and reinforced steel, from which the hulls of the boats will be made. One boat is now under construction at the Montreal Dry Dock Company's plant. She is about 200 feet long, the hull having a thickness of 3 to 5 inches.

Mr. Robson Black, Secretary of the Canadian Forestry Association, Ottawa, has recently completed an itinerary of seven New Brunswick towns and cities, during which he addressed well-attended public meetings on forest conservation, presenting the facts of the present timber supply and the need of eliminating fire by a reorganized forest service, and the official supervision of cutting operations so as to prevent waste. The meetings were held under the auspices of Boards of Trade and similar organizations, and the addresses were illustrated by motion pictures.

The Chester Basin Shipbuilders, Ltd., Chester Basin, N.S., built and launched a schooner during the summer that has just passed. At the time of the launching, early in the fall, they had the keel laid for another schooner of the same size, namely, 100 tons, and expected to have it ready for launching about the end of the year. In October they commenced building a 600-ton four-masted schooner, which they expect to complete in June, 1918. The company's yard is equipped with a rotary saw, band-saws, and planers. They give employment to 40 men.

The Falmouth Shipbuilding and Transportation Company, Ltd., incorporated recently under the Nova Scotia Companies Act, is reported to have acquired a site at Falmouth, N.S., for a shipbuilding plant. The location is at the junction of the river and passenger bridge, adjacent to the Dominion Atlantic Railway and the Hants Manufacturing Company's sawmill, where sufficient lumber has been accumulated for the construction of the first vessel, which will be commenced shortly and launched early in the autumn. The officers are: E. E. Armstrong, president; F. W. Dimock, J. L. Sexton, T. B. Aikins, and T. A. Mosher, directors; A. P. Clark, secretary-treasurer.

The Established Channel of Business Information

Recently Governor Whitman of New York State broke several engagements and travelled all the way to Chicago to address the Associated Business Papers of the United States and Canada. He said he did so because he regarded the business press as the established channel of business information, and, as New York State is the largest business and financial centre of the world, he desired to place the views of big business of New York before the business interests of the entire United States.

The business press of Canada has been quietly performing great work for Canadian manufacturers, business men, and financiers, since the war broke out.

Car Builders Discuss Wood and Steel

The relative merits of wood and steel for car building purposes were discussed recently at a meeting of the Car Foremen's Association, Chicago. A report of the meeting published by the American Lumberman shows that the old idea that steel would soon take the place of wood in car building has been revised as a result of lessons taught by experience.

Mr. H. G. Sackett, timber engineer of the Chicago, Milwaukee & St. Paul Railway Company, who had access to the car service records of his line, drew liberally upon them, and also upon certain statistics of the railroad lines of the country as a whole. His paper is available in a bulletin of the National Lumber Manufacturers' Association, and it is not necessary, therefore, to review it in detail here. It may be said, however, that the record of maintenance of passenger coaches for an entire year showed that wood cars ran on an average 39.8 months before shopping, and steel cars 37.3 months, and that the shopping cost was 37 per cent. greater for steel than for wood. This cost on sleeping cars was 34 per cent. greater. In these figures, also, the wood equipment was considerably older than the steel, necessarily requiring a correspondingly larger outlay for repairs. Another table showed the cost of repairs to twenty-five wooden passenger coaches for the first five years of service to total $25,121.17, and $41.855.51 for twenty-five steel coaches, or 67 per cent. greater for steel. This paper also stated that it usually takes longer to make repairs on a steel car. "A wooden car can be very badly damaged and yet it will be in the shop a shorter time than a large steel car whose center sill and main body have only been pushed slightly out of alignment," said Mr. Sackett.

As to length of life, it is generally considered that wooden cars with ordinary repairs will last from twenty to thirty years. Steel cars have not been in service more than ten years and their actual length of life has, therefore, not been positively determined, but from the condition of the older steel cars at the present time it is obvious that they will not last as long as the average wooden cars. The author gave a number of instances of the most usual forms of depreciation, resulting largely from corrosion.

The conclusion to which the author arrived was that wooden cars can be built more cheaply, that they can be maintained at a lower average maintenance cost and that they will have a longer average life.

Turning to freight cars, the paper gives figures which show in general that four-fifths of the all steel cars built up to the present time have been of the hopper and gondola types. There are still in service more all wood freight cars than steel and the steel underframed combined. The steel underframe and wooden superstructure is recommended as the most durable type of construction because of the difficulty of fastening draft rigging to a wooden underframe in such a way that it will not loosen in time and cause failure. Figures of one of the western roads were referred to, showing that but 60 per cent. of the composite gondolas in service required repairs while 72 per cent. of the steel gondolas were brought to the shop. The difficulty of blocking or securing freight in the all-steel box car was also referred to.

There was a very lively discussion of the paper at the meeting. The first speaker stated that some thirty years ago he was asked to prepare a paper to read at such a meeting and intended to talk on the coming of the steel car. Upon reconsidering, however, he changed the subject of his paper to something more conservative, deciding that the steel car had not yet really come. He doubted whether it could be said that it had really arrived at the present time.

The next speaker stated his belief that car designers were coming more and more to recognize the valuable features and limitations of all materials, concentrating more and more on the strong steel underframe with a wooden substructure. It is necessary that a car shall be able to withstand the shocks to which it is subjected in rough handling of long trains and also the hump switching which is now largely used. The railroads are beginning to realize that steel is not a good material to use in the presence of sulphuric acid which is developed when coal is subjected to moisture and here conditions seem to favor a steel frame with wooden superstructure. Especially in drop bottom cars is a steel frame absolutely required because the frame of such a car is a mere skeleton and can not be made sufficiently strong of wood. In box cars the speaker questioned whether steel superstructure would be much used in the future. He favored, however, building up a light skeleton structure of steel, with either a single or double sheathing of wood. This, in his opinion, was preferable to using a wooden frame, which does not stand up well because of the difficulty in making rigid fastenings. Under the swaying stresses the bolts tend to loosen up. The speaker further said that one of the railroads, which perhaps was the pioneer in the use of steel box cars, a few years ago found that it had not made sufficient allowance for the stresses incident to side sways, and in some instances the cars deviated from line 18 inches to 2 feet. These cars were simply run by the side of a concrete wall which had been built for that purpose and pushed back into position again with screw jacks.

In concluding the speaker predicted that the freight car of the future would combine the strength of steel where strength is needed, with the good qualities of wood where wood obviously is the better material to use.

The next speaker, Mr. Wallace, urged the desirability of conservatism in dealing with such questions. A few years ago there was a general condemnation of the new type of locomotive, which was declared to be absolutely ridiculous, but for some reason or other these locomotives continue to be built and increasing numbers are now in service. Wood might answer very nicely for a 40 or 50-ton coal car, but imagine it being used as a material for a 100-ton coal car. The car in any case should be constructed for the conditions on the road where it is going to have its greatest mileage.

The speaker further remarked that there were steel cars and steel cars, and he very much questioned whether car designers made proper allowance for depreciation in strength of materials due to corrosion. He was under the impression that they figured the thickness of metal plates and the size of beam upon what would get by while the car was new, entirely disregarding the effect of ten years of service with perhaps indifferent paint protection.

Britian Securing Steam Trawlers in Canada

The Dominion Government has undetraken to have built in Canada 36 steel steam trawlers and 100 wooden steam drifters, of standard British types. These trawlers will be about 125 feet long between perpendiculars, 23 feet beam, and 13½ feet deep. They will have triple expansion engines of about 500 horse-power. The work of having these vessels built has been delegated to J. W. Norcross, vice-president and managing director Canada Steamship Lines, Ltd., Montreal, who is acting as director of construction, and is being assisted by three of the company's other officials, W. E. Burke, assistant manager; F. S. Isard, comptroller, and H. W. Cowan, operating manager. The orders are being distributed among existing shipbuilding plants from Quebec to Port Arthur, and it is probable that one or more plants which have not been in operation for some time will also be utilized. The materials, including engines and other machinery, are bought by the government and supplied to the builders.

Toward the end of the summer of 1916 a demand sprang up in Canada for freight vessels for Norway. Between September 19 and November 15, 1916, the Dominion Government authorized the exportation to that country on completion of 18 steel steamships, to be built at New Glasgow, N.S., Montreal, Toronto, Port Arthur, and Vancouver. In addition to these a Toronto plant was authorized to export two steel freighters to the United States on completion. It appears probable that the majority, if not all, of these 20 vessels, for the export of which licenses were granted, will be taken over by the British Government, and it may be regarded as a certainty that, for some time to come at least, no more licenses for export will be issued. In addition to the above mentioned vessels, a company is building three more of the Norwegian type, making six in that plant.

A Busy Nova Scotia Shipbuilding Firm

A comparatively new shipbuilding firm at Shelburne, N.S., is that of the Shelburne Shipbuilders, Ltd., formed in December, 1916. The manager, foreman, and staff, however, are all experienced shipbuilders. The president is Mr. A. D. Bruce, who was with the Joseph McGill Shipyard at Shelburne for twenty-seven years. The company have one of the best-equipped plants for shipbuilding in Nova Scotia. All the machinery is new, and includes bevel band-saws, rotary band-saws, planers, buzz planers, matcher and moulders, drilling machine, turning lathe, treenail and plug machines—in fact, every machine necessary for the vigorous prosecution of the shipbuilding industry. Electric power is used. The company have their own forge and galvanizing plant and a commodious wharf and docks, together with ample shed room for working in bad weather. Steady employment is given to about 45 men. The Shelburne Shipbuilders, Ltd., recently completed a freight and passenger steamer 140 feet long, 26 feet wide, and 12 feet deep for Messrs. Hugh Cann & Son, Ltd., Yarmouth, N.S., which will be operated on the route between Yarmouth and St. John, N.B. They have now started upon the construction of a tern sailing schooner of 325 tons.

Broadway Will Be Paved With Yellow Pine Blocks

A considerable portion of Broadway, from Chamber Street to Fourteenth Street in New York, is to be paved with creosoted yellow pine blocks. This being the busiest thoroughfare in America, the use of wood block paving on it is most important. Many thousands of yards of creosoted pine block paving is involved in the order. Another part of Broadway is to be paved with asphaltum over granite blocks, and there will be a fine opportunity to compare the two pavements.

Shipbuilding Activities East and West

The Tusket Shipbuilding Company is reported to have completed its organization and to have acquired several old shipyards at Tusket, N.S., and to be negotiating for other yards. It is stated to have four vessels under contsruction at Shelburne and four at Liverpool, N.S.

Alfred Wallace, of the Wallace Shipyards, Ltd., North Vancouver, B.C, is reported to have announced on returning there recently from Ottawa that the company had contracts for two steel steamships for British interests and for eight wooden ones for the Imperial Munition Board.

It is reported that a shipbuilding plant is being built at Catalina, Nfld., at a cost of about $2,000,000, and that wooden shipbuilding is extremely busy throughout the colony. A number of vessels are being built there under a bounty of $20 a ton, as provided in the government's act of last year.

The Whalen Pulp and Paper Company, which is engaged in establishing the largest industrial plant on Vancouver Island at the new town of Port Alice, near the head of the southeast arm of Quatsino Sound, will lay down two keels at a time, and will keep on building ships until it has enough of them to handle its export trade.

Thomas C. Rice, of Weymouth, N.S., is again going into shipbuilding, and is preparing to lay the keel of a large steamer. The vessels Mr. Rice built in years gone by and of which he was the sole owner, would make a good fleet if they were assembled, and would include square riggers, tern schooners and two-masted schooners.

A recent despatch from Washington quotes Chairman E. N. Hurley, of the United States Shipping Board, as stating that by March 1st, 1918, the shipyards of the United States will have completed 1,000,000 tons of ships. The new goal of the Board's expectations, he said, was ten times the production of 1916, which was a little over 750,000 tons.

The St. John Shipbuilding Company, St. John, N.B., are constructing five ways at Courtenay Bay, St. John, N.B., where five five-masted schooners with auxiliary power are to be built. It is reported that ten ways in all are to be laid down, that vessels will probably be built there for the Imperial Munitions Board, and that eventually steel vessels will be built.

The large shipbuilding plant on the Niagara River three miles below Bridgeburg, which has been closed for several years, will be opened at once for the construction of all-steel ships of Welland Canal size. The Canadian Allis-Chalmers Company, the holding concern of the Canada Foundry Company, which has owned the plant for ten years, will go into the shipbuilding business.

An ocean-going cargo steamer with deadweight capacity of 3.500 tons, named the "Tento," was launched on October 22, at the Polson Iron Works yards, Toronto. The "Tento" and a number of other vessels which are to be constructed were ordered by the Norwegian owners, but have been taken over by the British Government. The "Tento" is a steel vessel 261 ft. long, 43 ft. 6 in. wide, 23 ft. deep, with a draft of 19 ft. 6 in.

The wooden steamer Windsor was successfully launched at Robert Morrill's shipyard at Collingwood recently. The ship has been built for the Ontario Gravel and Freighting Company, Windsor, Ont., and has the following dimensions: Length, 105 ft.; breadth, 23 ft.; depth 12 ft., while the motive power is fore and aft compound engines, supplied with steam from a Scotch boiler 12 ft. by 13 ft., and carrying a working pressure of 155 pounds per square inch.

The shipyard of the Three Rivers Shipyard Company, Ltd., which is building two wooden steamers for the Imperial Munitions Board, at Three Rivers, P.Q., is situated at the western side of the Three Rivers harbor, and covers an area of some five acres. Dredging is to be undertaken in order to reach the deep water in a basin of 350 feet long, 150 feet wide, with a mean depth of cut of 7 feet. The plant will consist of one two-storey machine and pattern shop, 75 feet by 175 feet, concrete foundations, the bottom being clay and sand. Mr. John Bourgeois, Quebec land surveyor and A. M. Can Soc. C. E., is the acting engineer for the company.

Specifications issued by the United States Emergency Fleet Corporation for the spars and masts for the wooden vessels which are to be built on the Atlantic, Gulf, and Pacific Coasts for the United States call for the use of Douglas fir spars and masts. Each vessel will be equipped with a foremast, a mainmast, and eight cargo booms. The foremast will be 72 feet 6 inches long, 8 inches in diameter at the top, 18 inches in diameter at the heel, and a maximum diameter of 13 inches. The mainmast will be 86 feet long. The booms will be 42 feet long, 9 inches in diameter at the top, 12 inches mid-diameter, and 10 inches in diameter at the base. It is expected that 600 of the larger size and 2,400 booms will be required.

The first wooden ship of its kind built at Quebec since the old days of the sailing vessels, when the shipbuilding industry flourished in Quebec, was launched October 28, at St. Laurent, Isle of Orleans. The vessel is a four-masted one, with auxiliary power, and its length over all is 223 ft., 42 ft. beam, and the depth of hold is 20 ft. Its tonnage is figured about 1,350, while deadweight will be about 2,100 tons. The schooner was constructed by the Quebec Shipbuilding and Repair Company, and it was named the "Martin Connolly," after the local representative of the company, the head office of which is located in Montreal. The boat is for private enterprise, and is not one of the vessels constructed for the Imperial Munitions Board. The material used was wood grown in Eastern Canada, except that used for masts and decking.

Inland Empire Shipments Show Increase

During the first nine months of the present year, mills in the Inland Empire of the United States, reporting to their Association, shipped 4,700 cars more of lumber than during the corresponding period of 1916. The total increase of shipments amounted to 155,265,000 feet. Shipments exceeded cut during the first nine months of the present year by almost 50,000,000 feet. It is interesting to note that the shipments of white pine to Canada from this district were more than doubled. During the first nine months of 1917, 382 cars were shipped into Canada, containing 9,212,859 feet. During the first nine months of 1916, the shipments amounted to 191 cars, containing 4,579,387 feet.

Lieut. Colin G. P. Campbell Killed in Action

Word from the British front has been received by G. D. Campbell, president of the Campbell Lumber Company, with lumber and pulp mills at Weymouth, Nova Scotia, that his son, Lieut. Colin G. P. Campbell, M.C., 5th Reserve Brigade, R.F.A., was killed in action Oct. 10 When he met his death he was on his last tour with the guns up the line, before being transferred to the aviation corps. Lieut. Campbell was one of the first Canadians to volunteer for overseas service, and had been wounded twice in previous engagements, first at La Basse, in June, 1915, and again at Death Valley, beyond Crucifix Hill, near Courcelette, on July 18, 1916, when he suffered "multiple wounds" and was awarded the Military Cross for conspicuous bravery. This is the second of Mr. Campbell's six sons in the service who has been killed in action. Lieut. Kenneth A. Campbell, of the 42nd Black Watch, Royal Canadian Highlanders, met his death at Vimy Ridge, on January 23, 1917.

Piece Work in Lumber Yards

A successful hardwood dealer in an Ohio Valley city is a great believer in the piece-work system as applied to handling lumber. He has been using it for a number of years, and has found that it works. It seems to be of special interest at this time, when labor is scarce and the character of help which can be secured for lumber-yard operations is not any too good.

The first thing, of course, is to establish a rate that will insure having the lumber handled at a reasonable cost to the yard, and at the same time will enable the industrious worker to make a good return on his efforts. The yard should be protected and the unambitious employee penalized.

After the rate has been decided on it should not be changed. Sometimes employers who adopt the piece-work plan find that certain individuals are making such large amounts that their earnings seem unreasonable, and an attempt is made to revise the rate downward. But this involves an implication of bad faith that is likely to cause the workers to lose their enthusiasm.

One of the advantages of the piece-work system, as indicated by the experience of the dealers referred to is that yard crews do not have to be driven, either individually or collectively. The man who hangs back and does not do his part to get the car loaded or the pile stacked is not only decreasing his own earnings, but those of the other men in his crew, and they are sure to play the part of foreman and to prod him to greater exertions. Hence "soldiering" is reduced to a minimum.

The men likewise do not need to be watched to see that full time is put in. On the other hand, some of them come to work an hour or two ahead of the usual time, in order to get through early. They are in every way more interested than under the day-work system, because their earnings are directly in proportion to the amount of work actually accomplished.

It is very little more trouble to keep track of footage handled under the piece-work system than to total up the time put in, and the inspector can take care of this detail as well as not. Some of the hardwood men believe in paying a little higher rate for handling thick lumber, on account of the usual amount of labor required, and there are other individual variations; but the plan as a whole seems to be readily workable.

How to Pile Lumber for Best Results

Details of Methods Recommended by Railway Storekeepers' Association—The Use of Strips and Sheds—Protection Problems

At a recent meeting of the Railway Storekeepers' Association of the United States, a committee on the arrangement of storage yards for railway lumber submitted a report containing a great deal of useful information on the piling of lumber. That portion of the report which is of general application, follows:—

In selecting a site for the storage of lumber, care should be used to avoid locating upon low ground which is overflowed at intervals or upon which water collects and stands after rains or snows. If, on account of local conditions, such a site is the only one available, proper drainage must be provided to carry off quickly any accumulating moisture. No material should be piled on bearings spanning low spots or drainage ditches in which there is standing or running water.

The site of the storage yard should be fairly level, on grade with the tracks which serve it, and should, in all cases, be covered with cinders or similar porous filling to a depth of at least 6 inches to insure proper drainage and keep down weeds.

Layout of Yard

When tracks have been installed the yard should be carefully measured and platted and proper space assigned to each kind, class and size of material carried. Various classes and kinds of stock should be grouped and so located as to permit of handling with greatest facility to and from cars and to points of consumption. All pine and fir bridge timber should be in the same section of the yard, served by the same tracks and piles arranged in sequence according to sizes. All oak timber for maintenance of way use should be similarly arranged. Switch ties should be grouped, with each length piled separately and arranged according to size. All plank 2 inches thick and under, as well as boards of all kinds and dressed car material, such as siding, lining, roofing and flooring, which are received in straight quantities, carloads or less, should be assigned to one section of the yard where it can be handled direct from cars to pile and it is advisable to have this material located in the same section of the yard as the lumber storage shed and served by the same tracks, if possible.

In platting the yard it is advisable to arrange for all sizes 2 inches thick and over to lie parallel with the tracks so that it may be most economically handled. If space will permit it is also advisable so to pile all plank and boards.

In all cases piles must be so platted as to allow for two lots of each size and kind of material, so that new receipts of stock will not be piled on material which has been in stock for long periods. This will permit the using of the old stock first.

When the yard has been properly platted and the location of each size and kind of material determined, the pile locations and alleys should be staked out by actual measurement, using care to line the piles parallel with the track.

Bearings

Substantial bearings should be constructed of second-hand or reclaimed material, such as side plank, old car sills, second-hand bridge and structural plank and timbers, etc., but in no case should material be used which shows evidence of decay.

Separate bearings should be constructed for each pile of material, and in the construction of these bearings consideration must be given to the nature of the ground upon which they are laid—i.e., whether it is solid, thoroughly settled or recently filled ground; and, if the last, the depth of the fill. Bearings should be built of sufficient strength to carry the maximum load the space will accommodate, this regardless of the quantity of stock to be cared for in the immediate future.

All material used in bearings should, after being cut to the desired size, be protected from decay by applying two coats of hot creosote oil. The creosote oil should be heated to a temperature of about 190 degrees (not over this) by placing it in a metal vessel about the size of an oil barrel, which should be filled not more than half full. This should be placed over a small, slow fire until properly heated, but great care should be used to prevent the oil from getting too hot or the fire too large, as the oil is highly inflammable. The operation should be conducted at a sufficient distance from buildings and lumber piles to insure safety.

When the creosote has been properly heated, small bearing pieces and blocking may be coated sufficiently by dipping in the heating vessel by means of timber tongs or tie tongs. To the larger pieces the creosote should be applied thoroughly with a brush. This can be simplified by pouring the hot creosote from a spout can upon the surface of the timber and spreading it with a brush, but care must be used to have all sides and ends thoroughly coated.

Each bearing piece must be held upon a sufficient foundation to prevent, as much as is possible, the settling of the bearing after the material has been piled thereon, and sufficient bearing pieces must be laid under each pile properly to distribute the load and prevent sagging of the material between bearings. The thinner the material to be piled, the greater the number of bearings necessary. Material under 2 inches in thickness should have a bearing at least every 5 feet of its length. If 16 feet in length, four bearings should be used; if 8 to 14 feet in length, three bearings should be used. Material 2 inches to 6 inches in depth should have bearings not more than 8 feet apart, while material over 6 inches in depth may safely have bearings spaced 12 feet apart, and in the case of timber 10 inches or over in depth the bearings may be spaced 16 feet apart. In all cases the outside bearings should be directly under the ends of the material and the intermediate bearing equally spaced.

The bearing should consist of three parts—viz., ground pieces, "A"; risers, "B," and bearing pieces, "C."

The ground pieces, A, are used to give greater width of surface to the foundation. These ground pieces should consist of 2 or 3-inch plank from 6 to 12 inches in width and 2 feet in length and should be laid in relation to the position of bearing piece C. The risers, B, are used to give the proper elevation to the bearing. These pieces should be set at least 6 inches in width and of such height as is necessary to give the proper elevation and should be from 18 to 24 inches long. They may be formed of several pieces of 2 or 3-inch plank 6 inches or over in width laid one upon the other until the required height is reached. These risers should be set crossways at about midway the length of the ground pieces.

When the necessary number of foundations composed of ground pieces and risers have been prepared, the bearing piece C should be applied. The dimension of the bearing piece will vary according to the material available and the weight of the lumber for which the bearing is being constructed. It should not be less than 4 inches by 6 inches and should be long enough to rest upon at least three foundations. If rectangular in shape it should rest upon the edge. Where heavy loads are to be applied to bearings, the bearing piece should not be less than 6 inches by 8 inches. Two thiinner pieces, if of the same width, may be laid down upon edge side by side and spiked together to obtain the required strength. Bearing pieces should not be nailed to risers, as, in case of a slight settling of the bearings at some point after the load has been piled upon it, it may be found necessary to jack up the bearing piece at that point and correct the level by inserting shims between the bearing piece and the riser. The top line of the bearing piece should be perfectly level longitudinally.

Each pile bearing should be constructed in such a manner that the material piled thereon will be higher at one end than at the other and afford sufficient pitch or slope to permit any accumulation of moisture from rainfall or melting snow to run rapidly off the pile. The high end of the pile is termed the "front" of the pile, and for uniformity all piles in a yard should pitch or slope in one direction, if possible.

The elevation of the bearings will vary according to the character of the lumber to be piled upon them. Bearings for lumber up to 24 feet in length should have an elevation or pitch of not less than one-half inch for each foot in length of the material to be piled thereon. It is not considered necessary to have an elevation greater than 16 inches, regardless of the length of material. The elevation allowed should be the difference between the height of the front and rear bearing pieces, and any intermediate bearing pieces should be so adjusted in height that when the material is laid upon the completed bearing it will rest upon all of the bearing pieces without sagging at any point.

Method of Piling Lumber

In piling of all lumber care must be used to have the piles substantially constructed to prevent them from falling apart or being blown over by wind storms. The sides or edges of the piles should be straight and parallel both horizontally and vertically. Piles of boards and 2-inch plank should not be built wider than the length of the lumber in the pile and in no case should the width of the pile exceed 16 feet. Plank over 2 inches in thickness and all timber should be piled in narrow piles of from 6 to 10 feet, although several piles of the same kind of material may be placed upon the same bearings closely adjoining each other. This arrangement permits the complete removal of a pile without waiting to exhaust the entire stock of one size and provides space for piling receipts of new stock without piling it on older or seasoned lumber.

Boards and 2-inch plank should be piled as high as conditions will permit, up to 20 feet from the ground. Larger sizes may be piled as high as facilities permit and local conditions require.

Lumber Sheds

Wherever a supply of kiln dried lumber is carried such as car siding, car lining, car roofing, car flooring, building siding, ceiling and flooring and also dry poplar, ash, mahogany and quartered oak, a shed sufficient in size amply to protect this material should be built.

The lumber shed should be of standard design, and may be left open on four sides or enclosed on one or more sides, as local conditions and the character of material to be stored may require.

Bill of material (preferably hemlock or chestnut) for one bent of standard lumber shed, 32 feet deep and 15 lineal feet of roof, would be:

	Feet	Feet	
1 Rear post	6x 8x16	64	
1 Center post	6x 8x18	72	
1 Front post	6x 8x20	80	
			216
4 Rafters	2x10x16	107	
2 Tie braces	2x10x16	54	
1 Lookout plate	2x10x16	27	
			188
2 Lookout braces	2x 8x 8	22	
6 Rafter braces	2x 8x10	80	
2 Lookout rafters	2x 8x12	32	
13 Roof joists	2x 8x16	278	
			412
Roof sheeting	1x8x12—16	576	
Lookout sheeting	1x8x12	96	
656 sq. ft. prepared roofing at 1¼c		...	
			672
Total			1,488

In the piling in sheds of dressed boards and 2-inch plank which have been kiln dried it is permissible to strip only between each five layers. In the piling out of doors of similar material which has not been kiln dried, as well as all heavier lumber, strips must be used under each layer in all cases.

In piling 1-inch and 2-inch lumber, the stock being piled should be used for piling strips, but in larger sizes strips 1 inch thick and not less than 2 to 4 inches wide should be provided.

The piling strips should be no longer than the width of the pile, and in no case should project more than 2 or 3 inches beyond the side of the pile. No strips should be allowed to run through from one pile to another. One piling strip should be used over each bearing piece upon which the lumber rests and should be placed directly over the bearing piece or the strip previously applied. The edge of the strip used on the front of the pile should be allowed to project over the ends of the lumber upon which it rests at least ⅛ of an inch. This will act as a "drip cap" and assist in preventing the ends of the lumber from checking and splitting.

The ends of each course of lumber applied to the pile should be brought flush with the edge of the piling strip at the front of the pile. By following this method the pile will have a forward pitch of about 1½ inches per foot, which, together with the slope of the pile, will prevent accumulation of moisture from rains or snow.

Except where piled in a shed, all lumber should be separated in the layers so that a space of from ½ inch to 1 inch is left between pieces to allow for free circulation of air on all four sides of the piece. This permits of rapid and thorough drying of the lumber and prevents sap staining and rot. Lumber so piled may be allowed to remain in stock for a long period without damage. This space may easily be regulated by instructing the workmen to allow the width of a finger between the edges of pieces.

All boards and plank dressed on one side, which are stored out of doors, should be piled with the dressed side down. When a similar lumber is rough on all sides the side of the piece nearest the heart of the log should be down. This will retard the checking of the lumber and the opening of shakes in course of seasoning.

In piling of lumber 2 inches and under and of miscellaneous lengths the entire pile should be of the same length from front to rear as the longest piece of material in the pile. Thus if 1-inch lumber 8 to 16 feet in length is being included in the same pile, that pile should be 16 feet long and should be even at both ends. This is accomplished by bringing the ends of the shorter length alternately to the front and rear of the pile. By this method a ragged appearance of the rear of the pile is avoided and there is no waste due to warping and checking of ends of longer length projecting from the rear of the pile unprotected.

All rectangular sizes 5 inches in thickness or over, whether rough or dressed, should be piled on edge. This includes car sills, car framing, etc., guard rails, caps, stringers, bridge and switch ties and heavy joists of thickness above mentioned.

All piles of 1-inch boards, poplar and hardwoods of all thicknesses, dressed car flooring, and 2-inch plank not under roof, should be protected from sun and rain by covering of rough boards laid in two courses with the cracks in the lower course lapped by the boards of the upper course. This cover should be laid upon strips so that it will be about 6 inches above the top of the pile at the front and 2 inches at the rear. Care should be used to have this cover always in place.

In removing lumber from piles in the yard, that which has been on hand for the greatest length of time should invariably be taken first. Lumber should always be taken from the top of the pile and in no case should workmen be allowed to break into the side of the pile to avoid effort of going to the top and removing and replacing the cover.

Care of the Yard

The lumber yard should at all times be kept free from refuse and accumulation of material other than lumber. All piling strips and car stakes not in use should be collected and a proper place for them provided. The piling strips should have reasonable protection so that they will be dry and sound when wanted. Under no circumstances should decayed lumber be used for piling strips.

No decayed lumber should be allowed to remain in the lumber yard, and any decayed material received should be removed to a place apart from the good lumber and destroyed or disposed of as soon as possible.

The lumber yard should be kept clear of all weeds and grass, as these not only promote decay in the lumber but, when dry, add to the fire risk. The removal of weeds and grass can most efficiently be accomplished with a weed hoe, but the growth can sometimes be retarded by a strong salt solution sprinkled freely about the ground.

Fire Protection

Wherever possible the lumber yard should be protected from fire by a system of water mains and suitably located fire hydrants and hose houses. In addition to these a number of water barrels should be placed at convenient points throughout the yard for emergency use. A fire pail should be kept at each barrel and the barrels should at all times be kept filled with water. This can be prevented from becoming stagnant, as well as from freezing, by dissolving into each barrel from 50 to 100 pounds of salt. These barrels should be kept covered at all times, by a removable board or metal cover, to retard evaporation, and should be painted periodically to preserve the barrel. Red paint is recommended for the barrels in order that they may be conspicuous.

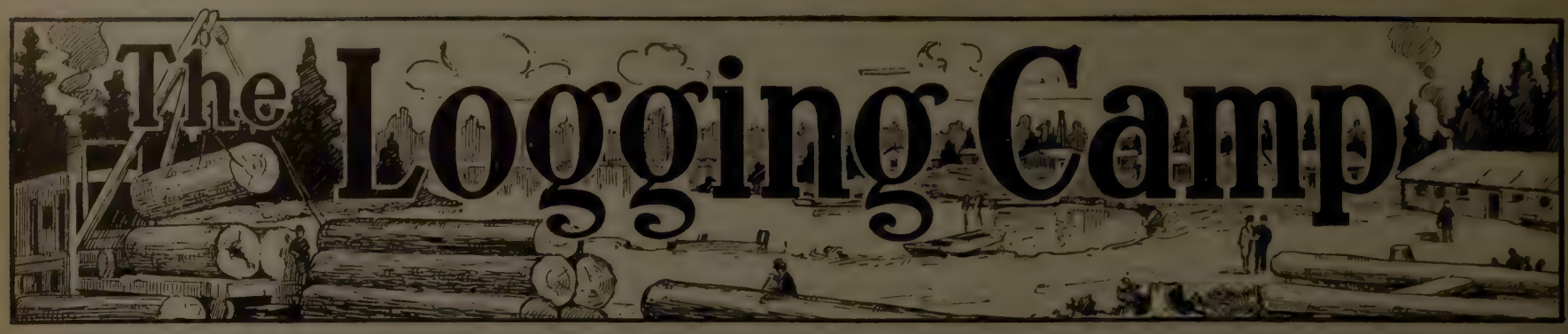
Where no water pipe system is available a barrel should be provided at least every 100 feet along each track throughout the lumber yard.

Creosoted Water Pipe Making Headway

A wooden water pipe 10.440 feet long and 12 feet in diameter will be used in a power development project in New York State. Douglas fir staves equivalent to 1,800 000 board feet of lumber will be used in the construction of the pipe line. 3.500 feet of which will be of creosoted material and the balance of untreated wood. The creosoted portion will be laid in the portions of the line where the head is not sufficient to ensure perfect saturation of the wood by water. In the other sections where the wood is saturated, creosoting is not considered necessary, since thoroughly water-soaked wood is not subject to decay. There has been some popular prejudice to the effect that the taste of water is affected by the use of creosoted wooden pipe. but a series of exhaustice investigations conducted by the Bureau of Industrial Research of the University of Washington in co-operation with the water and engineering departments of the city of Seattle and several industrial concerns has shown that water running through creosoted wooden pipes does not acquire any foreign taste therefrom after the first two or three days of use, and other tests have demonstrated that, after thirty years of continuous service in water, creosoted wood retains approximately 70 per cent. of the quantity of oil.

The annual meeting of the Western Retail Lumbermen's Association will be held at Winnipeg, on January 23, 24 and 25. The program for the convention has not yet been completed, but Secretary N. G. Neill advises that "it will embody an extensive exhibit of building material and comodities which retail lumbermen handle or should handle."

A despatch from Seattle, Wash., states that the spruce sawmills of Washington and Oregon may be taken over by the Federal Government for the production of airplane stocks to the exclusion of other lines. This proposition is largely the result of co-operation offered by the Lumbermen's Protective League.



Conservation of Food in Logging Camps

By W. C. Ruegnitz, Bridal Veil Lumbering Co., Portland, Ore.

My introduction to camp life several years ago was as a timekeeper and commissary clerk. My bunk the first night was a floor of earth under a tent which was so uncomfortable that I got up when I heard the cook swearing because he could not get his fire started with wet wood—I helped the cook. From that time until now I have been closely associated with the care and feeding of men in camps.

My mother's training after the Civil War was one of economy and carefulness founded on necessity, and she taught her children that waste was a great sin. When quite young I helped at home and did much of the marketing. Comparison of the conditions at home with camp life raised the question—Why is it necessary to buy so much food for the number of meals we are serving. And an analysis of that question is more in order now than ever before.

The chemistry of cooking and food combinations are being developed to such an extent that the logger will soon discuss food values and will know how many calories are required to keep the human machine working efficiently.

To feed the logger it is necessary to combine food supplies, cook house and cook—and any part of the combination that is not in working order will cause trouble.

The average cost of labor in a logging camp today is about 40 cents per hour. The average cost of feeding the logger on the same basis is 10 cents per hour—which is to say, 25 per cent. of the labor cost is the cost of feeding.

Are you giving your camps the proper proportion of consideration? I will take up the conservation of food under the following general heads:

The Cook and His Workshop.

The Buying and Storing of Food Supplies and Accounting for Supplies.

Plate and Table Waste.

Garbage Pail Waste.

Recipes, Menus and General Suggestions.

Before it is possible to operate a camp properly the kitchen—the cook's workshop or laboratory—must be provided, and in order to aid in saving it must be well considered. The kitchen and its equipment must be large enough to properly handle the work to be done. You cannot expect a cook to handle 100 men with a 50-man kitchen, but this is too often the case and is a reason for food being thrown out, there not being store room enough to care for it for another meal.

Too little attention is paid to the cook's living quarters. If anyone in camp needs a bath it is the cook. Give the cook the proper place to work—a clean place for himself and his crew—and it will reflect in the meals he serves.

I will not attempt to go into details regarding the requirements of a properly equipped kitchen because every camp requires a different handling. However, as a general rule, if adequate stove space and oven room is furnished, together with proper equipment for washing dishes, etc., the kitchen crew will do their work easier and will save more food than in a poorly equipped kitchen.

Along with the kitchen the dining room should be one that is cheerful. The seating capacity and width of tables, together with the coverings and dishes, should be considered with the end in view of making the room attractive and homelike. The man who eats his food slowly eats less and gets better results from the food consumed than the man who bolts his meal in a hurry. Would it not be a good idea to put a gramophone in the dining room and have suitable records played? A few well-considered pictures would be in order on the dining room walls. A flag in a conspicuous place with a large placard, "Your Flag and Mine," should be in every dining room.

A cook's work usually takes from early morning until late at night every day in the week. It is very desirable to arrange to give the cook a vacation often enough to prevent his getting stale on the job.

Buying and Storing Food Supplies

It is hard to give any particular rules which will apply to the buying of food supplies. A careful study of local conditions, together with the season of the year and the personal equation of the cook in charge of the camp, is necessary in order to buy properly.

Some cooks are able to handle certain classes of food supplies to far better advantage than others. Too often orders for food supplies are placed by inexperienced camp clerks. Sometimes they are placed by the cook himself.

When food is bought in large quantities and stored within easy reach of the cook, the natural tendency is to be careless because it is so handy to go and get some more.

When the food has been purchased the next step is to properly take care of it before it is used. There is no need to go into details with reference to this feature. An inspection of most store houses brings out the fact that there is a considerable waste here that could be eliminated, and it requires the personal, intelligent attention of a reliable man. It is something that should be watched carefully every day.

In order to buy food properly one must know exactly how much food is required for a given number of men, and in order to simplify records and put them in common terms, it appears that to reduce all records of food supplies used to the term of "pounds per man per meal" is desirable. A standard report suitable for the use of all logging camps can be made and the resulting comparisons these reports will give would be very beneficial. Reports could be had from all of the camps from the Northwest which would show the number of pounds per man per meal required. With these reports standardized they will of themselves point out ways and means of eliminating waste. My opinion is that if food supplies are properly handled there is no necessity for using more than two pounds per man per meal. Getting out reports on this basis is a foundation toward a more scientific record in terms of calories and other classifications that will be developed as soon as education along these lines becomes more universal.

Before leaving the question of accounting for food served I wish to emphasize the necessity for keeping record of all the meals which have been served. The idea is that leaks of any description must be stopped. What we want to know is that the food that is purchased goes into the man's stomach and not elsewhere.

Table and Plate Waste

There is a big difference of opinion with reference to placing food on the table. The general practice in camps is to place all of the food on the table and let the logger help himself as he sees fit. Some argue that full dishes point toward waste. Others argue that if the dishes are not well filled the logger thinks there is a limited supply and with his eyes larger than his stomach he fills up his plate so as to be sure to have enough for himself, with the result that there is some left on his plate which cannot be used. Here again is an opportunity for individual handling in the camps by the man in charge.

Attractive posters gotten up in the way to appeal to the logger could be placed in the dining room requesting the men not to leave food on their plates—to stir the sugar into their coffee—that to leave sugar in the bottom of the cup is a waste.

The number of meals served has a considerable bearing on the amount of food that would be eaten as well as the satisfaction given. Many people are unable to eat very much breakfast and before noon they cannot work properly. To provide for this it is well to give the logger a sandwich to take out to the woods so that he may eat whenever he feels the necessity.

Often times where careful reports of camp operation are kept it is found that too much food is being used. If an inspection of the garbage pail is made one can quickly determine certain sources of waste.

In one camp that the writer is familiiar with there was practically nothing in the garbage pail to feed the hogs except egg shells. It was noted that the cost of meals in this particular camp was much lower than in the neighboring camp where the hogs were very fat.

It has been suggested that suitable menus be gotten up for the purpose of distribution among the camps so that standard regular meals would be served. I do not believe this is in order because of

the varied training of our cooks. Also the number of men to be fed has an important bearing on this feature. It is in order, however, to give the preparation of food and the training camp cooks much thought from the standpoint of university training.

The kitchen is a laboratory and the preparation of food is a branch of chemistry which should be taken up by higher educational institutions. We should have university graduates for cooks as well as university graduates to do our engineering and other scientific work.

I will not attempt to go into the discussion of recipes. There are thousands of ways to save, and there is absolutely no excuse for anything being wasted in camp. Even bacon rind can be used as a food by special preparation. Bread scraps, hot cakes, etc., are frequently found in garbage pails, but if oven space is provided these foods can be dried and ground up and used again. There seems to be a universal dislike toward hash, which is a common way of using up left-overs. This dislike was undoubtedly founded on the fact that the men had been served with hash that is not fit to eat. It is too often the case that a cook will leave his left-overs until at least part of the supplies have spoiled or soured and when made into hash the taste is reflected and no amount of seasoning will eliminate it.

As a summary of the above the importance of giving your cook a proper workshop, the careful buying of food supplies, standard reports, and technical training of men for the position of cooks should be emphasized.

Winter Schools in the Logging Camp

By A. H. Powers, General Manager Smith-Powers Logging Co.

As to the possibility of winter schools in camps: In my mind, if the right kind of a teacher could be had—it all depends on that—winter school in the camp might do considerable good. You realize as well as I do that your teacher must be a practical man who has done all this work himself. A man who is a good talker and organizer is the man, in my opinion, that would make a good teacher for foremen, hooktenders and timekeepers. This man should be able to fill the position of a superintendent in a logging camp.

It would be useless to send out a man to the various camps to instruct men if he were not a practical man himself and who could explain as well as do any of the work that is to be done in the woods and also be able to teach it. There is a question in my mind if there are many men today who have positions, that you could get to do this work and who would be capable of instructing the men.

In my experience on the Pacific Coast with labor, it is entirely different from what it was when I was employing 1,500 men or more in the East. There never was a time in the East that I did not have a considerable number of men who would make good foremen that were working at different kinds of work in the camps. I have found it very different on the Coast. Most of the men nowadays want to do as little as they can and get all the money possible for it without taking any interest at all in the company's business, and they would just as soon destroy lines, blocks and machinery as they would to take care of it and keep everything going in good shape. The class of men today are very different from those who worked in the woods twenty years ago and longer.

At that time every man in the camp used to take an interest in his work, and see how much he could do. They started early in the fall and would never leave the camp until the river driving started in the spring. They would stay and drive the logs out without a man ever leaving the camp unless he was sick or hurt.

Today the majority of the men seem to want to have a few dollars ahead and then lay off to spend it. If there is any way in which men can be taught to save their money and try and earn what they get, I would be very much in favor of anything that anyone could suggest to see if a change could be made.

I have tried every way possible to get men to save their money and grow up with the business so that there would be a chance for all good, capable men to better their positions and increase their earnings.

While I am very much interested in the welfare of our men, and also interested in educational matters for the benefit of our men and in bringing closer relationship between the employee and the employer, I have always been in very close touch with our men and made it a point to always spend the time to take up all grievances and talk over and adjust any imaginable wrongs which they may have.

I would also state that superintendents and foremen must keep in close touch with their men at all times, and see that they have the proper equipment to work with, and see that they are properly taken care of in a bodily sense.

Clean, sanitary camps and plenty of well-cooked food are essential to the welfare of an organization.

The idea of a course of training for cooks is worthy of consideration.

The probability of winter schools for foremen, timekeepers, hooktenders and all special men will probably meet with the approval of the majority of loggers.

In my experience I have always noticed that the young men who start out in life and make good, are the men who take a great deal of interest in their work, and who try to do all in their power to get work done and accomplish good results. The man who makes good is the man who always tries to get more accomplished each day by profiting by his previous experience and mistakes. He must figure the best possible way to get work finished in the easiest and cheapest manner. A man in the woods must learn his lesson as well as the man in school. If he does not he will not make good, for he will not know how to do what he is expected to do if his lesson is not learned.

After any young man has had engineering experience, he should go into the woods and work at all kinds of work that is to be done, and acquaint himself with all branches of the work, so as to be able to take any new man and instruct him in every possible way to do woods work in the best manner.

If a young man has the ability to be a leader of men, and is a close student of work, he should in five years be able to learn a great deal about the logging business, and by having engineering experience before he goes into the woods, be able to combine his theoretical knowledge with practical experience, and make himself a valuable man for the logging industry.

Many of the problems that logging engineers will come in contact with in the rough country along the Pacific Coast will require judgment gained only by hard work, both physical and mental.

I will assure any young man who undertakes to make a thorough woodsman of himself that he will learn a great deal more in the second five years than he did in the first five years, and will continue to learn as long as he is actively engaged in the business, for the reason that conditions are continually changing, and a thorough study must be made of each change.

Falling and Bucking Logs

By A. R. Baker, Hammond Lumber Co.

It has been our aim the last few years to endeavor to increase the efficiency, as well as the economy, of falling and bucking our timber. In order to arrive at a greater degree of efficiency, during the year 1915 we decided to try an experiment by installing the VanOrsdel system of bonus for fallers and buckers. At the end of the year 1916, after using the bonus system the entire year, we found we had decreased the cost of falling and bucking from ten to twenty per cent. as compared with the previous year.

During the present year we have found a great many men who do not want to work on the bonus plan, on account of their not caring to exert themselves to their greatest efficiency, yet we have not given up the idea of the bonus plan.

By having a good head-bucker, he is able to instruct the men where to fall the trees to save them the best. He is also a great help to men only partially experienced, should they be willing to co-operate with him. We find that we are able to save our timber better under the bonus plan than under the day's-pay plan. Under the old day's-pay plan, if a man was enough of a politician to get the head-bucker to place him on the highest priced position, it was sometimes hard to find out who was not producing enough logs. Under the bonus plan, providing you can get a fair scaler and head-bucker, it is easy to determine if a faller or bucker is an expert in his business. We will admit that it seems to be harder to break in new men under the bonus plan than it is with the day plan. There seems to be individual pride among men that they like to earn a bonus, where you offer a bonus, or they do not feel inclined to stay at their positions.

Under the bonus plan we have foound that it was not necessary to keep as many fallers and buckers in a camp as it was under the day's-pay plan. This we consider an advantage, as we do not have these extra men to board and haul to and from work.

In the future we expect to do our falling and bucking either by so much per thousand, or pay bonus on the plan of so many square feet sawing making a day's work. We are convinced that probably the piece work is the best solution for this problem.

On the other hand, we think the bonus system is a benefit to both the employer and employee, if an arrangement can be made where neither party will suffer any injury.

Hoo-Hoo to Send Tobacco to Forestry Regiments

The Concatenated Order of Hoo-Hoo have decided to establish a bureau to collect funds for providing tobacco and other comforts for the men of the United States and Canadian forestry regiments and for other lumbermen who have enlisted and gone overseas. The order has dcided upon this course at the request of many lumbermen. A bureau has been established for this purpose at 1218 Wright Building, St. Louis, Mo., in charge of E. D. Tennant, secretary-treasurer of the Concatenated Order of Hoo-Hoo.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) $2.10 per inch, each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted—Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Wanted

Large size Elm Logs wanted. Address P. O. Box 5, Papineauville, Que. 21-2

Wanted

4 cars Sawdust, 3 cars Spiles, 5 cars Hemlock or Cedar Ties, 2 cars Cull Basswood, 6 cars Cordwood, a number of cars Hardwood or Softwood Slabs. Apply Box 637, Canada Lumberman, Toronto, Ont. 20-23

Wanted—Lumber

Slabs and Edgings—Hardwood and softwood; five to five hundred cars, for cash. Box No. 641, Canada Lumberman, Toronto. 21-24

For Sale—Lumber

For Sale—Inch and two inch Spruce, widths piled separate.

Hendun Lumber Company, Limited,
23-23 Haileybury, Ont.

FOR SALE—Ten cars Heavy White Oak Ship Timbers for immediate delivery. Apply

Georgian Bay Shipbuilding Co.,
22-1 Midland, Ont.

Lumber For Sale

Two cars 4 x 4 Maple Boxed Hearts.
One car 5 x 5 Maple Boxed Hearts.
One car 6 x 6 Maple Boxed Hearts.
Seven cars Fir Doors.
Three cars Fir Columns.

GEO. C. GOODFELLOW,
23-23 Montreal, Que.

For Sale—Machinery

Slab Resaw For Sale

Heavy Horizontal Slab Resaw, Giddings and Lewis Make, 6 ft. wheels, 8 in. saws; used only four months.

FIRSTBROOK BROS. LTD.,
20-23 Toronto, Ont.

Steel Rails For Sale

A small quantity of 20 lb. light re-laying rails, for sale for immediate delivery. Apply Box 650, Canada Lumberman, Toronto. 23-24

For Sale

One 3-roll 52-in. Berlin Sanding Machine. Used only few weeks.

THE BEAVER BOARD CO.,
20-23 Buffalo, N.Y.

FOR SALE—5/8 in., 3/4 in., 7/8 in. diam. wire rope, in lengths from 50 to 200 ft., suitable for guying purposes or for making booms, 4c per foot pet in any size or quantity.

H. W. PETRIE, LIMITED,
22-1 Toronto, Ont.

For Sale—225 H.P. Corliss Engine with 250 volt, 600 ampere, 150 k.w. Northern Electric dynamo and switchboard and connections and a quantity of copper wire. Fairbanks Morse underwriters fire pump, 16 x 9 x 12. Two boilers 72 x 16.

J. C. NOLEN,
23-23 Muskegon, Mich.

Machinery For Sale

1 Goldie & McCulloch Engine, 16 in. x 38 in. Complete with Heater, Pipes, Oil Pump, etc. In first-class condition.
1 Holmes Matcher.
1 Band Rip Saw.
1 Dynamo Engine, Jewel No. 3.

R. Laidlaw & Co., 65 Yonge Street, Toronto. 19-23

For Sale—Cheap

One semi-portable saw mill, consisting of nearly new Jenckes Machine Company 40 H.P. firebox boiler with stack; 35 H.P. engine; three-saw edger; two saw trimmer; carriage, with set works, rope feed and track; sawdust conveyor; cut-off saw; shafting, pulleys, belting, etc.; two 56-in. Atkins saws used one season; automatic saw gummer; and some railroad iron and car. Located near Sault Ste. Marie, Ont. May be shipped by water or rail.

Write Herbert E. Stiles, 436 Ethel Street, Grand Rapids, Mich. 22-23

Planing Mill Machinery For Sale

Only in use for 18 months and almost as good as new.
1 Q. Y. Matcher, Gourlay.
1 Butting Saw, Gourlay.
1 Rip Saw, Gourlay.
1 Sticker, Ballantyne.
1 Scroll Saw, Ballantyne.
1 Surface Planer, Gourlay.
1 Heavy Band Resaw, Cowan.
1 Emery Grinder.
1 Large Fan, McEchran.
1 40 H.P. Westinghouse Electric Motor.
Saws, knives, dressing heads, etc., etc.

OTTAWA LUMBER COMPANY,
22 Metcalfe Street,
22-1 Ottawa, Ont.

Wanted—Machinery

Wanted—Circular Slab Resaw, second hand, in good condition.

York & Sunbury Milling Co., Ltd.,
23-2 Fredericton, N.B.

We are in the market for the following second-hand equipment: Power plant for fifty-foot, shoal draft tug boat; double engines preferred; one slab resaw; one double saw, automatic feed; tie mill. Address with full particulars and price,

Reamsbottom & Edwards,
22-1 Connaught Station, Ont.

Refuse Burner Wanted

Second-hand Refuse Burner in good condition, 12 to 15 feet in diameter, and moderate height. Address with full particulars and price.

REAMSBOTTOM & EDWARDS,
20-21-22 Connaught Station, Ontario.

Wanted—Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

Thoroughly competent lumber salesman is open for position with good firm on road or in office. Box 650, Canada Lumberman, Toronto. 23-24

YOUNG MAN, six years' experience as stenographer and bookkeeper in lumber business, desires change. Best of references. Box 629, Canada Lumberman, Toronto, Ont. 19-2

Position wanted by man of experience in both wholesale and retail lumber trade. Well acquainted also with the travelling end of the work. Available at once. Can furnish excellent recommendations. Apply Box 642, Canada Lumberman, Toronto, Ont. 22-1

Manager with best of references from present and past employers desires to make a change. Eleven years' experience in lumbering, estimating, milling, mapping, river work, purchasing and office duties. Technical education as engineer and forester. Box 647, Canada Lumberman, Toronto, Ont. 22-23

POSITION WANTED—As office manager or accountant with lumber and woodworking business; 15 years with one large Ontario concern; 5 years as treasurer and office manager. Practical knowledge in all departments of business; aggressive and up-to-date methods. Age 48; best credentials. At present engaged, but desire opportunity with large concern where advancement is assured as reward for ability and services. Apply Box No. 648, Canada Lumberman, Toronto, Ont. 22-23

Wanted—Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

First class bookkeeper for lumber and planing mill business. Young married man with thorough knowledge. Commencing at New Year's. State salary and give experience. Box 652, Canada Lumberman, Toronto, Ont. 23-1

WANTED—Man with knowledge of stenography and a little office experience, able to do invoicing and inventory work, to act as assistant to Superintendent of Sawmill. Good opening and year round employment to right party. Box 644, Canada Lumberman, Toronto, Ont. 22-23

Business Chances

For Sale

About five or six tons of 5/8 and 9/16 tested chain in lengths from 27 ft. to 30 ft. with ring on one end and hook on the other end. Address Drawer "F," Sarnia, Ont. 19-t.f.

For Sale

2,000 acres well timbered bush in township of Sinclair, new mill, stable and camps. Loading point, Huntsville. Reason for selling, ill-health. Apply to

HOLINSHEAD & ROGERS,
21-24 Huntsville, Ont.

Mill Plant and Limits For Sale

43 Miles Limits on 31 Mile Lake, Gatineau Valley, containing Basswood, Spruce, Fir, Pine, Cedar, Birch, Maple and Pulpwood.

New Waterous 8 ft. Improved Double Cut Band Mill complete. Steam Alligator, Boats, Sleighs, Wagons, Harness, etc. For further particulars apply to

A. W. STEVENSON,
P. O. Box 2624,
8-t.f. Montreal, Que.

Tide-Water Stumpage For Sale or Exchange

For sale, or will exchange for good ranch or farm land, B. C. Tide-water stumpage, cruised and surveyed.

CARL BLOCK,
19-t.f. Peoria, Illinois

Sale of Timber

Tenders will be received by the undersigned up to and including Monday, the 3rd day of December next, for the right to cut the timber on a portion of the Township of Idington in the District of Algoma, and a portion of the Township of Owens in the District of Temiskaming, situate on the line of the National Transcontinental Railway.

The area upon which the timber in Idington and Owens Townships is offered for sale comprises 10 acres off the front of each lot in the said Townships, and in addition the road allowance between the several concessions therein. This may more particularly be described as follows, viz,—being a strip of land 8 chains 92 links in width, or being 4 chains 46 links measured at right angles on each side of the centre line of said road allowance.

Terms and Conditions of Sale

Tenderers will state (1) the amount they are prepared to pay for Pine and other timber respectively in addition to Crown dues of $2 per thousand feet board measure; (2) the amount per tie in addition to Crown dues of 5c each for such timber as may be suitable for making railway ties; (3) the rate per cord for Spruce pulpwood in addition to Crown dues of 40c per cord; (4) the rate per cord for other timber suitable for pulpwood such as Balsam, Jackpine, and Poplar in addition to Crown dues of 20c per cord; (5) the rate per cord for cordwood for fuel purposes in addition to Crown dues of 20c per cord.

1. The successful tenderer shall cut and dispose of all underbrush and shall also dispose of all debris caused by cutting and removal of the timber hereinbefore mentioned, said cutting and disposal of underbrush and debris to be under the supervision and performed to the satisfaction of an officer or officers of the Department of Lands, Forests and Mines, all cutting and other work to be completed by 1st day of June, 1918.

2. The timber is to be sold subject to the Manufacturing Condition, that is to say, it is to be manufactured in the Dominion of Canada.

3. Tenders to be for each Township separately. Each tender to be accompanied by a marked cheque for $2,000.00, payable to the order of the Provincial Treasurer, the deposit to be held by the Department to insure proper compliance with all the terms and conditions of sale.

4. The sale to be subject to the Crown Timber Regulations, excepting in so far as the same may be inconsistent with any conditions herein specified, and to such Acts or Orders-in-Council as now exist or may hereafter be passed affecting timber or territory under timber license from the Crown.

The Department does not bind itself to accept the highest or any tender.

Tenders to be addressed to the Minister of Lands, Forests and Mines, Toronto, and marked "Tender for Timber."

Maps showing the Townships may be obtained upon application to the undersigned, or from Mr. Geo. A. Bremner, the Crown Timber Agent, at Cochrane.

G. H. FERGUSON,
Minister of Lands, Forests and Mines.
Toronto, October 30th, 1917.

N.B.—No unauthorized publication of this notice will be paid for. 23-24

Horses For Sale

For Sale—Ten teams of heavy Horses with harness.

Canada Pine Lumber Company, Ltd.,
23-23 Kearney, Ont.

Jobbers Wanted

We wish to let several contracts to take out logs on Berth No. 6, being broken front lying between the Magnetawan and French Rivers. This berth is all convenient to Canadian Northern Railway.

John Harrison & Sons Company, Limited,
Saw and Planing Mills,
9-t.f. Owen Sound, Ont.

FOR SALE
as a Going Concern
Saw Mill and One Hundred Square Miles Crown Lands

Mill capable of sawing eight million superficial feet per year. New boilers, good engine and pumps, gang and rotary shingle and lath machines and planer. Railway siding in yard, also water shipping.

This property is situated in a thriving centre where labor is available. Good general store, boarding house and other buildings in connection with property. Good reasons given for selling.

No one need apply except bona fide purchasers.

Apply, Lumber, Box 643, Canada Lumberman and Woodworker, Toronto, Ont. 22-t.f.

TENDERS
for Pulpwood Limit

Tenders will be received by the undersigned up to and including the seventeenth day of December next for the right to cut pulpwood and pine timber on a certain area situate in the vicinity of the Kapuskasing River in the Districts of Timiskaming and Algoma.

Tenderers are to offer a flat rate per cord for all classes of pulpwood, whether spruce or other woods. The successful tenderer shall be required to pay for the Red and White Pine on the limit a flat rate of $10 per thousand feet board measure.

The successful tenderer shall also be required to erect a mill or mills on or near the territory, and to manufacture the wood into pulp and paper in the Province of Ontario, in accordance with the terms and conditions of sale which can be had on application to the Department.

Parties making tender will be required to deposit with their tender a marked cheque payable to the Honourable the Treasurer of the Province of Ontario, for Twenty-five Thousand Dollars ($25,000.00), which amount will be forfeited in the event of their not entering into agreement to carry out conditions, etc. The said Twenty-five Thousand Dollars ($25,000.00) will be held by the Department until such time as the terms and conditions of the agreement to be entered into have been complied with and the said mills erected, equipped and in operation. The said sum may then be applied in such amounts and at such times as the Minister of Lands, Forests and Mines may direct in payment of accounts for dues or for any other obligation due the Crown until the whole sum has been applied.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

G. H. FERGUSON,
Minister of Lands, Forests and Mines.
Toronto, September 19th, 1917.

N.B.—No unauthorized publication of this notice will be paid for. 20-24

New Crown Land Scaling System for British Columbia

A Vancouver despatch states that by a new system which went into effect on Oct. 1, all timber cut on Dominion lands, chargeable to crown dues, will be scaled by an employee of the Department of the Interior. This announcement was made by Mr. E. Walmsley, assistant crown timber agent. As a severe penalty is provided in cases where such timber is sawn without first being so measured, licensees of timber berths and contractors are being notified by the Crown Timber Office, and every effort is being made to give the widest possible publicity to the change, which has been made with the object of improving the service to the public and giving the department control over the measuring of timber in which they are interested. Hitherto, such timber has been scaled by employees of the various operators, who made a return every three months of the amount of timber logged, the dues payable being based on this return. Under the new system a fee of 5 cents a thousand for sawlogs, 5 cents a cord for shingle bolts, and 5 cents for every 200 lineal feet for piling and poles will be charged.

Pro-German Agencies at Work

Convinced that pro-German agencies are at work to hinder the aircraft production program, officials at Washington, D.C., believe a drastic campaign against agitators may be necessary, reaching to the spruce forests of the northwest. Numerous cases of sabotage have been reported from mills that are cutting airplane wood. Labor disturbances fomented by the Industrial Workers of the World have also been hampering the government in building swiftly the air fleets that are expected to strike a decisive blow at the German defense. The regularity with which accidents occur in various lumber mills convince officials that a definite sabotage campaign has been organized by hidden enemies which must be stamped out.

Notes on Saw Sharpening

To reduce the power consumed to the lowest limit, to save wood, and turn out the most and the best work requiring the least after finish, the saw teeth should be exactly adapted to the nature of the wood, and be alike in (1) shape, (2) length, (3) hook, (4) space and gullet, (5) setting, (6) bevel, (7) gauge, and (8) temper, so that they may each take their full share of work. This may appear a somewhat formidable list, but with a well-equipped and operated tool-room they can practically be secured.—M. Powis Bale, in "Saw Mills."

Union Lumber Co.
Limited

White Pine
Red Pine
Spruce
Red and Jack Pine
Lath

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

—if you buy cheap, low-grade tea you are practicing false economy.

The advantages in favour of *good* tea are

Greater number of cups to the pound.
Real flavour.
Satisfaction instead of dissatisfaction.

"SALADA"
TEA

is the finest quality Ceylon and Indian Tea that will yield generously and prove more economical in the long run than any cheap, low-priced tea.

The sealed moisture proof packets facilitate storage, transportation and stock inspection.

Many Lumber Camps and Mines favour us with their patronage for these advantages.

In any case write to us for samples and prices.

SALADA TEA CO.
TORONTO

Review of Current Trade Conditions

Ontario

A number of reports recently received from large wholesalers selling to the Ontario trade agree that there has been an encouraging improvement in the retail trade during the past fortnight. Quite a strong demand has developed among the retail yards. No doubt this is accounted for largely by a general realization that prices are not likely to decline during the winter, but are more likely to increase. Many retailers in Ontario delayed about giving orders for their usual fall purchases, believing that prices were too high and would come down in the near future. This belief has not been justified up to date, but prices have been steadily advancing. In the face of this situation, retailers who now find their stocks very low and a fairly good demand from their customers, are coming into the market again, and trade which in normal years would have developed about a month ago is now coming out. Definite examples of this have been reported in numerous cases, the retailer being induced to loosen up by the fact that instead of getting lower prices he has lately been quoted advancing prices on stocks which he knows he will have to purchase to enable him to do his regular fall and winter trade. The farmers of Ontario have done well during 1917 and retailers find that there is a good demand for stocks from this quarter.

There have been quite a number of new shell box orders let recently for 4.5 in. and 6 in. shell boxes which will have an important effect upon the consumption of available stocks suitable for this purpose. The Imperial Munitions Board appears to be centering its orders for shell boxes in fewer hands than formerly; evidently placing orders as far as possible with the lowest tenderers and giving them as much business as they can handle, rather than scattering the business about the country with a large number of concerns. No orders are yet reported for boxes in connection with the shells to be manufactured in Canada for the United States Government.

The demand for lumber for various war purposes continues strong. There is a definite rumor in the air to the effect that the United States Government will shortly be requiring no less than 400,000,000 feet of white and red pine and spruce from Canada for its various war uses. No actual corroboration of this report is yet available, though it is known that representatives have already been making enquiries in Ontario as to available stocks and have been securing lists. The authority upon which this report reached the Canada Lumberman is so good that we feel that it should be published . If anything approaching this large quantity of pine and spruce is taken out of eastern Canada during the winter it is difficult to imagine where there will be any other stock left in the country.

Prices of all lines in Ontario continue strong and advances of $2 to $3 a thousand feet are reported in a number of cases. Price quotations, however, do not give much of an idea of actual market values which prevail today, as almost every transaction seems to be regulated by the urgency of the demand and the possibility of making shipment.

The latest reports from manufacturing points in northern Ontario are along the same lines as those which we have published in previous issues. Manufacturing costs this winter are certain to be exceptionally high on account of the scarcity of labor and its inefficiency, together with the high cost of all kinds of supplies. A number of important manufacturers will not operate this winter at all. Others are taking out a smaller cut than usual and on account of the labor scarcity even those operations which have been planned are being handicapped by difficulty in getting camps properly under way. The military service act is expected to take away quite a number of men from the woods and as the lumber camps have already furnished a large number of men for forestry battalions and for the combatant forces as well, this industry is certain to suffer more almost than any other. Lumber operators are unanimous in the opinion that the government ought to adopt a policy of exempting the few remaining men who are available for camp operations.

Eastern Canada

The lumber trade at Montreal is quiet, the commencement of winter conditions having caused the demand to weaken. On account of the small quantity of building operations under way, the market for building lines is very quiet. Shipbuilding yards also seem to have on hand sufficient stock for their present requirements, and there is only a little movement in this line, though unquestionably the trade in ship timbers will be more active in the near future. A few more orders have recently been let for small shell boxes. Factories using hardwoods and veneers for piano and furniture production are quiet and there is very little demand for hardwoods for interior trim.

The demand for export to the United States continues fairly active, but the trade is handicapped by the great scarcity of cars. The export season has now come to an end and the results, when they are available in tabular form, will show a great falling off as compared with former years.

At St. John, N.B., the lumber trade is almost idle. The only export shipments are small parcel lots for the Admiralty. There will also be a small quantity of stock shipped during the winter port season which commences about December 1st. The American and English markets show no decline in prices. No tonnage is available for shipping goods to the English market, and, therefore, there is no question of price. Cars for shipment to United States points are very scarce and the volume of this trade is small. The scarcity of labor is growing more pronounced daily, many men being taken on account of the Military Service Act. It is probable that a large quantity of stock which operators were counting upon taking out this winter will not be touched. Woods operations generally are far behind what was planned. Wages are advancing all the time and bushmen are leaving the camps every day.

Local trade at St. John is quiet and factory work is decreasing as the winter weather draws on. All the St. John mills will have closed for the season in a few days.

The demand for spruce at Boston is fairly good, and prices are firm, the government requirements being a strong factor in the situation. The reduced cut of logs and the high cost of production at the mills are also important factors in maintaining the firmness of the market. The building trade continues dull, and the same applies to the retail trade. There is still a lot of government work ahead for the mills. Similar conditions prevail in connection with spruce in New York. Hemlock is quiet at Boston, and the trade in dimension is very slight, spruce being substituted. The demand for hemlock boards is only fair. The shingle and lath markets at Boston are quiet. Lath in particular are dull.

Great Britain

The total stock of all wood goods in the Surrey Commercial Dock at London is scarcely half the quantity which was on hand a year ago. This is really not a matter for much surprise, considering the great difficulty there has been in getting steamers to carry cargoes to London. The result is, however, that London seems temporarily to be losing its position as the chief importing centre of the softwood trade. The decline has been gradual for the last twelve to eighteen months, and to-day the supplies include only a quarter of a million pieces of European deals, about a half a million pieces of battens, with Canadian spruce and pine in proportion. Rough boards appear in large quantity, but are mostly Archangel short ends, which do not add up to as much as might be thought, because of the small quantity they contain individually. Weekly deliveries are gradually decreasing.

Unfortunately, there does not seem to be any sign of improvement so far as importers are concerned, as the greater part of the business done is from government stock. Many importers are struggling along gamely, but there is a strong feeling that the softwood trade is being badly treated and the desire for greater freedom to trade is gaining headway.

Very little spot business is reported from Liverpool. Available stocks of softwoods are very light, but there is a promising volume of enquiries as to future business. The import of Quebec yellow pine deals at Liverpool during October was nil. The consumption accounted for 100 standards, leaving only 190 standards available in stock: Imports of Quebec red pine deals amounted to 90 standards and consumption was only 20 standards, leaving the stock at 480 standards. Quebec spruce deals show a slight increase in import, namely, 170 standards against 50 standards for the preceding month. The consumption rose by 100 standards and the stock has been reduced to 680 standards. Imports of New Brunswick and Nova Scotia spruce and pine amounted to 1,220 standards, but very little of this was for private account, practically all of it being for the government buyer. The consumption continues stationary at 640 standards. The stock has now reached 3,010 standards. Only a very small proportion of this stock, however, is held in private hands.

More encouraging reports are received from Manchester than from other lumber markets in Great Britain. There is a decided eagerness on the part of buyers to pay spot cash for anything they can secure. If there were liberty to import and the price limitations were

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

removed there would probably be a rush of trade. There is quite a volume of inter-trading between importer and importer and merchant and merchant, which seems to be a strong argument that the trade would be very active if it were not throttled. Reports are frequent of parcels changing hands half a dozen times, and always at a profit.

United States

There is a noticeable increase in the demand for yard stock in many parts of the United States, particularly in the West and South. Large stocks such as are required by the government are only obtainable for government use. Prices in general are firm, and in many lines they are advancing. A large producer of yellow pine states that there is a great demand for dimension stock, and that prices have advanced as much as $2 a thousand during the past fortnight in some instances; also that boards have advanced from $1 to $2.50 per thousand. The car shortage continues to dominate the whole lumber situation. In the Southern pine districts the demand has increased, while shipments have decreased, and now the yards are adding their demand to that of the government. Price advances varying from 50 cents to $1.50 are reported in connection with most lines of Southern pine yard stock. No evidence of relief in connection with the car shortage has yet been reported from any district. The United States Government is reported to be about to call for Southern pine to the extent of 300,000,000 feet for the construction of knockdown houses for the use of troops in France. The government demand seems to be the most important factor in connection with the North Carolina pine. Prices are firm for practically all lines, except those controlled by the government, and at some consuming points stocks are scarce. The government recently announced a reduction of $1 a thousand on 2 in. dimension No. 1 common and 50 cents on 2 in. dimension No. 2 common. There is also an unconfirmed rumor afloat of a substantial reduction on government lumber for cantonment purposes.

The demand for Douglas fir is greater than the available supply. All prices are reported to be firm and some of them advancing. The transportation situation is exasperating, being characterized by scarcity of cars and frequent embargoes. The railroad demand is somewhat more active and there are heavy orders for special cutting, chiefly for shipyards and railroads.

The demand for hardwoods is strong generally, and particularly so for poplar, oak, and chestnut. Ash also has been in great demand. With the exception, however, of the business done with the government the general hardwood market seems to be somewhat erratic.

An extensive wholesaler at North Tonawanda reports that the lumber trade there is somewhat slow and uncertain. Embargoes and shortage of labor are making prices firm, and in some cases advances have taken place. Building operations are very light, and the furniture trade is quiet.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Ottawa Trade Report—Outlook Encouraging

Ottawa, Nov. 21.—(Special to the Canada Lumberman.)—The Ottawa lumber market during the closing period of November has remained firm, and the indications are that this condition will continue. In some grades, especially those used in shell box manufacture, the prices advanced slightly. Enquiries for domestic or export business continued good and in some instances increased as compared with the opening period of the month. The freight situation has become easier, and stocks are moving more freely. General conditions in the woodworking plants and in the lumber mills showed an improvement as compared with October.

Lumber manufacturers, dealers, and brokers believe that prices are going to increase before next spring. The outlook, they say, is good. Stocks, especially for shell box manufacture, are becoming scarce. There was a good demand for export business. Good progress, considering the labor situation, is reported from the woods end of the various companies. From the best information the representative of the Canada Lumberman could secure, this season's wood cut will not equal that of last year.

New shell box orders for a large number of boxes have been granted to some Ottawa woodworking plants. Information as to the total amount of contracts let with Ottawa plants was not forthcoming from the Imperial Munitions Board. One report which the Canada Lumberman was unable to confirm was that one plant had secured an order for 128,000 boxes. The new shell box orders should keep the mills busy for the next two months or longer. The labor situation remained unchanged. A shortage of woods labor continued to prevail.

The McAuliffe-Davis Lumber Company secured quite a large new order for shell boxes, which will keep the plant busy for two months.

The Estate James Davidson also secured a large new order for shell boxes. The plant is operating almost to capacity during the day, and the new order will necessitate operation one or two nights per week.

The Hawkesbury Lumber Company reports the camp and woods operations are proceeding as well as can be expected, considering the labor shortage.

The Chaudiere sawmill of the John R. Booth plant closed for the season on Friday, November 16. Between two and three hundred men were affected. The closing of the sawmill also reduced the number of employees in the yards and the piling ground. Other operations with the Booth interests, excepting woods labor, are reported as satisfactory. The camps are now all in operation.

Gilmour & Co. repart the market firm and the demand increasing. They believe prices will advance before next spring. "There has been no weakening in the market of late," they say, "and the prospects are that it will remain firm and advance."

Business with the Shepard & Morse Lumber Company continues good, and an increase is noted in export sales.

The W. C. Edwards Company had not, up to November 21, secured one of the new shell box contracts. The old contract this plant was working on has been completed. About forty employees are affected. The sawmill operations, according to the report on this date, will cease before the end of this month. Export business continues good. There is nothing new to report from the camp and woods end.

Montreal Markets—U.S. Demand Satisfactory

Montreal, November 27 (Special to the Canada Lumberman):—Trade generally has slackened. With the advent of winter conditions, the demand locally naturally declines, and this year, with building negligible, the buying is on a very small scale. The paucity of building going on may be judged from the fact that last month the permits only totalled $227,033, a decrease of $125,091. Very little new work is in sight, and the local yards which supply many of the contractors are buying only from hand to mouth.

There is even a falling off in the demand for shipbuilding lumber. For the moment, the requirements have been largely filled, but no doubt there will be a revival in this branch of the industry.

Further orders for small shell boxes have recently been given out, although the quantities are not very large.

In hardwoods, business is quiet. Trades using hardwoods and veneers, such as piano and furniture factories, are not so busy as they were, while hardwoods for interior trim are meeting with a poor demand.

The brightest spot is the section shipping to the United States. Enquiries from over the border are satisfactory, the great drawback being the lack of cars. The situation is far from reassuring, both as regards cars for the United States and for domestic requirements, and as winter conditions become more severe we may look for a still further depletion in the cars available.

The export season is now over—and a very poor one it has been, the worst for many years. Only a limited amount of lumber was shipped during the closing days, although the lower ports are said to have been fairly busy. A report received in Montreal states that the British Government has purchased all the available 3-inch spruce stock, 1917 cut, in the Miramichi and around Campbellton, N.B. districts at a flat rate. In and around Campbellton alone over 100,000,000 feet have been sold, while the total will exceed twice that amount.

The pulp markets are steady. Busienss has hitherto been slow, but it is now picking up. Prices, however, have not moved to any extent.

St. John Trade Very Quiet

St. John, N.B., November 26 (Special to the Canada Lumberman):—At the present moment the lumber trade is dormant. No shipments are being made excepting a few small parcels by Admiralty boats. No doubt a certain amount will move during the winter port season, which is expected to begin about December 1st. Prices, both in American and English markets, are not shorinking to any extent. The English market is devoid of deals, but no tonnage can be had to move

KLIM
SPELL IT BACKWARD
PURE SEPARATED MILK
IN POWDER FORM
FOR ALL COOKING
WHERE MILK IS NEEDED

KLIM
SPELL IT BACKWARD
PURE SEPARATED MILK
IN POWDER FORM
FOR ALL COOKING
WHERE MILK IS NEEDED

PURE
ECONOMICAL
WHOLESOME

The Best Milk for Your Camp

Klim is all the food value—and nothing else—of pure separated pasteurized milk in powder form. In buying Klim you are paying only for food values because all of the water which adds bulk and weight only has been removed. Klim can be mixed dry with other dry ingredients in cooking or can be dissolved in water and used as liquid. Klim is 100 per cent. body-building food value—the greatest amount at the least cost of any food you can buy.

Order from your Wholesale Grocer or Supply House.

CANADIAN MILK PRODUCTS LIMITED

10 and 12 William Street, TORONTO

Quebec Office: Montreal, P.Q.
W. H. Escott Co., Limited, Winnipeg, Man.
Calgary, Edmonton, Saskatoon, Regina.
Kirkland & Rose, Vancouver, B.C.

Plants: Brownsville, Ont.; Burford, Ont.; Belmont, Ont.; Hickson, Ont.

Maple Leaf Saws

Manufactured in Galt, Canada

We absolutely guarantee every Maple Leaf Saw. The fine Razor Steel used in all our saws is manufactured exclusively for us. Our secret tempering process refines and toughens the raw material to such an extent that Maple Leaf Saws will stand up under the most severe tests and last longer than any other saws on the market.

Write for our catalogue and prices

SHURLY-DIETRICH COMPANY, LIMITED

GALT, - CANADA

WESTERN BRANCH—1642 Pandora St., Vancouver B.C.
EASTERN BRANCH—306-308 Wellington Street, Ottawa, Ont.

the goods. Therefore it is not a question of price but how to get the deals across. The shortage of cars for American stock makes it very slow forwarding the material. Labor is becoming scarcer each day as men are being taken for war purposes. Many cuts which were expected to have been taken out this year will not be touched for want of help. The operators in general in the woods are away behind in their work; men are leaving every day and wages are going up. Local trade is only fair and as the winter draws near factory work is slowing up. In a few days all mills will have ceased the season's sawing.

Liverpool and Manchester Stocks

The following report upon Liverpool and Manchester stocks for the month ending October 31st, 1917, is furnished by H. W. Lightburne & Company, Liverpool, Eng.

Spruce and Birch

Liverpool

	Import			Consumption			Stock		
	1915	1916	1917	1915	1916	1917	1915	1916	1917
N.B. & N.S. Spruce & Pine, Stds. ...	3,260	2,960	1,220	5,100	3,920	640	14,570	13,650	3,010
Birch Logs, Loads	240	0	100	60	120	100	980	1,140	220
Birch Planks, Stds.	485	873	0	164	376	0	1,122	1,200	79

Manchester

Spruce, Stds.	2,700	3,990	350	5,470	3,400	540	16,780	20,540	4,370
Birch Logs, Loads	320	340	0	280	80	20	1,220	500	40
Birch Planks, Stds.	127	91	0	133	61	61	940	503	109

Stocks in Manchester and Liverpool Combined

Spruce

	1913	1914	1915	1916	1917	
Manchester	26,290	14,670	16,780	20,540	4,370	
Liverpool	9,740	7,280	14,570	13,650	3,010	
	36,030	21,950	31,350	34,190	7,380	Stds.

Birch Logs

Manchester	280	820	1,220	500	40	
Liverpool	460	300	920	1,140	220	
	740	1,120	2,140	1,640	260	Loads.

Birch Planks

Manchester	600	818	940	503	109	
Liverpool	861	564	1,122	1,200	79	
	1,461	1,382	2,062	1,703	188	Stds.

The United Kingdom Market for Spruce

The Timber Trades Journal, of London, Eng., in a recent issue says:—If importers have the courage or the rashness to speculate—and we are afraid that the latter term is the more applicable as long as uncertainty prevails as to the government's intentions—they could not do better than to put their money into Canadian spruce. The free-on-board price of the wood is much below the level ruling in the Russian and Scandinavian markets, and there will be a tremendously fine opening for spruce directly trade regains its freedom of action. Whitewood has become very much more valuable these last two or three years, and in the near future there will be very little competition from the cheap wood which was formerly shipped in large quantities from Riga. But we are afraid the times are too unsettled even for what would seem to be very promising ventures; for if the war continues, the tonnage handicap next season will be too severe, apart from the question of state control. There can, however, be little doubt that, should it be possible for private firms to ship next year, the purchase of spruce at the present time would be highly profitable. Should the war run well into 1918—and the government is bound to make provision for such a contingency—nothing can stop a further very appreciable rise in the value of wood all over the world. The Russions are talking of at least a 25 per cent. advance, and, as will have been seen from our Swedish correspondent's letter last week, the actual cost of the present production of sawn goods in Scandinavia has reached the extraordinary figure of 256 kronor per standard. With the high cost of living, which will continue to increase with the length of the war, labor will be more and more highly paid; consequently, commodities must rise in value in relation to money, and prices all round be on a more inflated level.

Boston Firm Recommends Caution

Correspondence received by the Canada Lumberman recently from a Boston firm of manufacturers and wholesalers states that trade conditions in the United States at present are quite dull, except for government work. "The building trade is almost at a standstill, and the higher prices go the less building there seems to be. The market is not flooded with lumber as it cannot be shipped, but we predict that if every man could get all of the lumber he has bought, shipped right in to him, he would be a good deal overloaded and would be sorry he had bought what he has. The facts seem to be that people buy and cannot get the lumber and then duplicate the order, hoping to get it from another place sooner, but do not countermand with the first party. If we had anywhere near our usual shipping facilities we believe the prices on lumber would drop very considerably, but it does not look as though we would have these facilities, so prices keep up and some are actually increasing still, and, of course, as the cost of production is still advancing, this is still necessary. However, we do not like the looks of the near future and believe extreme caution is necessary."

Wood Substitutes in Box Making

The shook box has probably lost ground to its competitors, the veneer box and the fiber container, during the decade 1904-1914 to an extent, measured in box material, of some 1,500,000,000 board feet of lumber annually, according to the United States Forest Service. The results of a study of this subject have been issued as Report 117 of the office of the Secretary of Agriculture. Shook box production increased between 1905 and 1912, the latest period for which reliable data are available, in the former year being 7,085,000,000 square feet, and in the latter 7,700,000,000 square feet, a gain of some 8 per cent. During the same period, however, the production of veneer boxes and packages increased from 100,000 to 1,500,000,000 square feet, a gain of 1,400 per cent., while the production of fiber containers also increased rapidly, the estimated production in 1914 being 331,760 tons, equivalent to 2,140,280,000 feet of 80-point board.

A large part of the replacement of shook boxes, of course, is by substitutes consisting largely or altogether of wood in other forms. Approximately 70 per cent. of the material going into fiber boxes is wood, and the veneer box and package are made entirely of wood. It requires less wood to make either a fiber or a veneer container, however, than to make a shook box of the same size.

The main reason for the substitution of fiber and the veneer container for the wooden box is their lower initial cost and lighter weight. It appears likely that there will be a gradual increase in the consumption of all classes of boxes. There would seem to be a logical field for each of the three main types, which will be more clearly defined when sufficient data becomes available to admit of the adoption of scientific specifications and shipping regulations.

STRATFORD OAKUM

Quality Guaranteed
Jersey City and Everywhere

GEO. STRATFORD OAKUM CO.
165 Cornelison Ave. - JERSEY CITY, U.S.A.

California White Pine
California Sugar Pine
and Arizona Soft Pine

Best Stock for Factory and Pattern Lumber

Ask LOUIS WUICHET
Room 716 Railway Exchange, CHICAGO, ILLINOIS

NEW ZEBRA, WOOD, WESTERN UNION, and PRIVATE CODES USED.

Telephones:
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W. N. HILLAS & COMPANY

WOOD BROKERS

FOR EVERY CLASS OF TIMBER

***Head Office*: HULL, England**

To the Lumber Companies of Canada:

You have the Goods. Place your Lists with full particulars in our hands. We are in daily touch with all the Buyers in the United Kingdom.

PLEASE NOTE.—We pay cash against all documents, and take the whole of the Delcredere risk on Buyers.

Install a KRAFT SODA MILL

CANADA has another big war opportunity: Great Britain needs more wood pulp. Install a small Soda Pulp Plant and Supply this need by converting your Slats, Tops, Bottoms and waste wood around the Saw Mill into pulp. We can dispose of any amount. Previous sources of supply in Sweden, etc., have recently been withdrawn and Canada now has a free field in Great Britain to market unlimited quantities of wood pulp. We can arrange contracts for long periods.
The cost of installing plant is small and you make a sure profit from waste material.

Write to-day for further details

Becker & Co., Ltd.

34-40 LUDGATE HILL
LONDON, E. C.
ENGLAND

THE LARGEST IMPORTERS OF

WOOD PULP

We have specialized in Canadian Pulp and have imported ninety per cent. of the Pulp supplied to Europe since 1899.

SOLE AGENTS FOR

CHICOUTIMI PULP CO., Chicoutimi, Canadian Hot Ground Spruce.
LAHAVE PULP COMPANY.
MACLEOD PULP COMPANY, Liverpool, Canada.
NOVA SCOTIA WOOD PULP AND PAPER MILLS COMPANY.
RIORDON PULP AND PAPER CO., Montreal. Easy Bleaching Canadian Sulphite Pulp.
ST. LAWRENCE SULPHITE PULP COMPANY.

New York State Retailers to Systematize Cost Accounting

An important step has been taken by the Retail Lumber Dealers' Association of the State of New York in connection with cost accounting. A committee appointed by the association has contracted with a firm of organization experts and industrial economists to furnish the association with a standardized system of cost accounting for the use of its members on both the yard and the planing mill end of their business. The firm undertaking the work is that of Hanks & Gregg, Chicago, of which Mr. I. B. Hanks, one of the members, is a practical lumberman. It is thus expected that the system will combine both simplicity and extreme practicability.

The New York State Association have taken a foremost place among associations of lumber dealers, as is shown by a resolution which they carried in conection with the above arrangement. The wording of this resolution was in part as follows: "That this association shall continue its policy of systematically fostering group meetings of dealers on a local district basis as conditions may warrant, for more effective co-operation with this association and with each other in the study of general and local trade problems and methods of doing business; and that this association shall co-operate with both the city and small town dealers by making suggestions through its officials for constructive service tending to remedy trade evils. We especially emphasize the necessity of a more accurate knowledge of the cost of doing business and of the use of better methods to ascertain such costs."

Russia: The World's Timber Yard

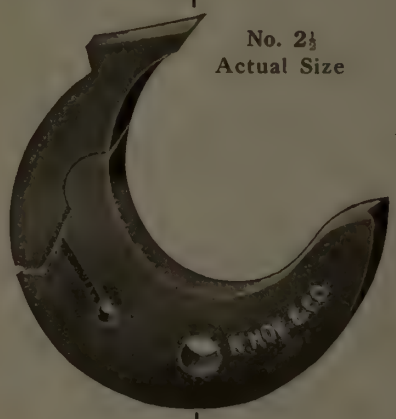
In a recent issue of the British Paper Trade Journal reference is made to the timber wealth of Russia in the following words: "To the man whose interests necessitate his keeping constantly informed of the timber and pulp supply of the world, the story of the Siberian forests—but one phase of its many naturally endowed potentialities—ought to read with unwonted attraction. Already the lumberman is beginning to turn his eyes from the Scandinavian peninsula towards Russia. Russia to-morrow will be the world's timber yard, for there are no less than two-fifths of the empire in forest land. In European Russia the forests extend over an area of about 345,000,000 acres, of which 214,500,000 acres belong to the state, 88,000,000 to individuals, 26,000,000 to peasants, and 11,000,000 to the crown, leaving 6,000,000 acres under diverse ownership. In Asiatic Russia most of the forest land belongs to the state. A conservative estimate puts it at 636,000,000 acres, a low figure when it is remembered that much of the land is as yet unexplored. Thus vast reaches of the timber belt in the Yakutsk Province, bordering on the Arctic, which have never known the foot of civilized man, are roughly reckoned at 90,000,000 acres. The same is true of the vast forest areas in Eastern Siberia. It is safe to say that two-thirds of the timber land in the Russian Empire lies between the Urals and the Pacific. Of the total 636,000,000 acres owned by the state 239,500,000 are being worked directly by the government, with a yield of about 300,000,00 cubic feet of timber."

Export Embargo Lifted

After having placed an embargo on the exportation of lumber from the Pacific Coast, and following a request by the West Coast Lumbermen's Association, that this embargo be lifted with the understanding that no material suitable for government purposes would be exported, the authorities have raised the ban on the exportation of such wood from the Pacific Northwest ports. The Assistant Director, Bureau of Exports, Washington, D.C., wrote the Association on this point as follows: "After carefully considering the requirements of commerce, of the emergency fleet corporation, the navy and the airplane division, the war trade board has decided to release the vessels now loading and to be loaded and will permit them to proceed to sea. This is done with the specific understanding that your association will place an obligation upon each of its members to deliver lumber to the Hog Island navy yard, the airplane building stations and the companies having contracts with the emergency fleet corporation of wooden vessels, giving priority over all other orders and see that no delay may take place in the work being done for military service or the shipbuilding program of the United States. If any delay should take place, it may then be necessary to place another embargo on lumber so as to take over some of that lumber for the needs of some of the branches of the service mentioned above."

The Canadian Commission of Conservation has recently made an investigation into forest fire losses in British Columbia and reports that twenty-two times as much timber has been destroyed by fire in British Columbia as has been cut by the lumbermen. On 95,000 square miles the timber has been uselessly destroyed, most of the loss having taken place many years ago.

Hoe Chisel-Tooth Saws



No. 2½
Actual Size

No saw can equal the cutting quality of Hoe Chisel-Tooth Saws. Our No. 2½, illustrated, is especially adapted for mills cutting heavy steam feeds. This size also made in suitable gauges for Edgers, Bolters and Lath Machines. We are pioneers of the industry. Nearly 100 years of saw making.

Write for literature and prices

R. Hoe & Co.

504-520 Grand Street

New York City

JEFFREY CHAINS

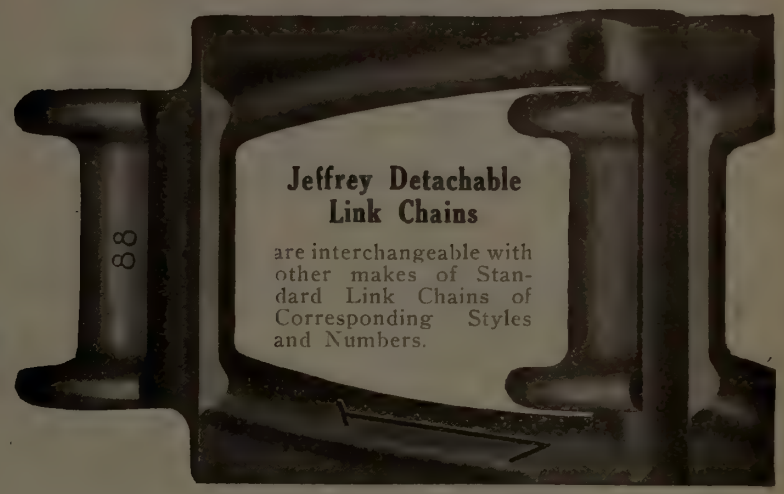
For Saw-Mills and Woodworking Industries

"Reliance" Riveted Drag Chain

especially adapted for Conveyor Service in handling Sawdust, Refuse, Shavings, Coal, Ashes, etc.

The long pin through the chain gives long life in the bending of the chain in its internal wearing parts.

Write for Catalog giving prices and list of Selected Chains carried in stock, and let us figure on your requirements.



Detachable Link Chains

are adapted for:

DRIVES—With uniform speed under non-gritty conditions without intermittent shock.

ELEVATORS—for light, non-gritty bulk materials; for **conveyers** with slats; for chains in multiple, with or without attachments for handling packages, boxes, barrels, etc.

The Jeffrey Manufacturing Company,

Canadian Branch and Warerooms
MONTREAL

JENCKES LOG HAULER

The engraving shown in this advertisement is made from a photograph of the Log Hauler recently furnished the Davison Lumber Company, taken as it was being tested out in our yards.

This type of Log Hauler is coming into use.

Quotations and particulars on application.

The Jenckes Machine Co., Limited

SHERBROOKE MONTREAL 908 E.T. Bank Bldg. COBALT TORONTO 710 C.P.R. Bldg. ST. CATHARINES VANCOUVER 616 Standard Bank Bldg.

Works: SHERBROOKE, QUE.; ST. CATHARINES, ONT.

The EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS DIEU RIEN
MONTREAL - Canada
Head Office at Montreal.

SPRUCE
ROUGH or DRESSED

Saw Mills at
MONT LAURIER, QUE.
STE. MARGUERITE, QUE.

Dressing Mills at
ST. JEROME, QUE.

Northern Office:
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Southern Office:
HATTIESBURG, MISS.

Herman H. Hettler Lumber Co.
2601 Elston Ave., CHICAGO, ILL.
Manufacturers and Dealers
White Pine, Red Pine and Yellow Pine,
Lumber and Lath
Excellent Planing Mill Facilities. Prompt Shipments.

LATH

Campbell, MacLaurin Lumber Co.
Limited
Board of Trade Building, MONTREAL

SPRUCE AND BIRCH
GOOD STOCKS PROMPT SHIPMENTS SATISFACTION
C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber, Lath and Shingles
Offices—McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

The Abitibi Timber Company, Limited, under the provisions of the Ontario Companies Act, have changed their name to the Beaver Abitibi Timber Company, Limited.

The planing mill of the Parry Sound Lumber Company, Parry Sound, Ont., which was recently destroyed by fire, will not be rebuilt this year. It is probable that it will be rebuilt next spring.

Operations upon the construction of the plant of the Port Arthur Pulp and Paper Company are progressing rapidly, and it is expected that it will be ready for operation in about six weeks. The company now have about 2,500 cords of wood on hand and have contracted for 70,000 cords.

The Union Box and Shook Mills Limited has been incorporated with head office at Pembroke, Ont., and capital stock of $150,000, to carry on business as manufacturers of and dealers in lumber, boxes, shooks, etc. Among those interested are J. H. Reeves, J. R. Lockhart, and W. F. Behan.

The Canadian Gambite Company, Limited, has been incorporated, with head office at Hawkesbury, Ont., and capital stock of $100,000, to carry on business as manufacturers of and dealers in the products of the forest, pulp, paper and all products or by-products of wood and pulp. The provisional directors are J. S. Lovell, W. Bain, R. Gowans, J. J. Dashwood, C. D. Magee, E. H. Stewart and J. Henry.

The head office of the Wilson Lumber Company, Limited, of Toronto, Ont., manufacturers of hardwoods and yellow pine, henceforth will be located at Jackson, Miss. Mr. P. Bass, general manager, will have his new headquarters at Jackson, where the band mills of the company, operated under the name of the Mississippi Hardwood Company, are located. The yard at Toronto will be continued, but the general sales and buying departments will be at Jackson.

Among the men interested in the Mingo Pulp, Paper and Land Company Ltd., Toronto, which was recently incorporated with capital stock of $1,000,000, are Clarence R. Pope, of New York City, and W. A. Brodie, of Toronto. The company own 20,000 acres of well-wooded and mineral lands northeast of Chapleau, Ont., and intend to take out 50,000 cords of pulpwood during the coming winter. The tract is well watered and is reached by two transcontinental railway lines. It is also rich in iron pyrites, which show a percentage of 46.94 sulphur extraction. It is said that the owners intend erecting a large pulp mill on the property in the near future.

The Eagle Lake Lumber Company, Limited, South River, Ont., which has recently been incorporated with Ontario charter, and authorized capital of $40,000, has taken over the manufacturing interests, timber, two sawmills, etc., of the C. G. Anderson Lumber Company at South River. The company is composed of Messrs. W. C. Shreiner, president; S. R. Anderson, vice-president; and H. Mawson, secretary-treasurer. The company will operate both sawmills, each of which has a capacity of about 15,000 feet per day. They will manufacture principally hemlock and birch and their head office will be at South River. The company intend to put two camps into the woods this winter and will take out about 2,000,000 feet of birch and hemlock and a small percentage of spruce. About one and a half million of this will be hemlock. The company have between 3,000 and 4,000 acres of timber.

Eastern Canada

Julien Therrien, wholesale and retail lumber dealer, Montreal, P.Q., has been registered.

The Canadian Pulpwood Products Association, Montreal, P.Q., has been registered. F. Laberge is interested.

Boudrias and Soucy, lumbermen, Montreal, P.Q., have been registered. C. Boudries and N. Soucy are interested.

The Parker Pulpwood & Timber Company have opened offices at 303 McGill Building, Montreal. They specialize in pulpwood. Mr. T. G. McLaurin is the manager.

Price Brothers, Quebec, P.Q., have under consideration the building of a new slash mill at Shipshaw, together with a chute across the Saguenay River, for conveying the wood from Shipshaw to their ground wood mill at Kenogami.

The greater part of the lumber piled in the sheds of Mr. Wilfrid H. Pauze, Cote des Neiges, Montreal, was recently destroyed by fire. Mr. Pauze specialized in B. C. lumber, mouldings, sheeting, flooring, etc., and kept a large stock on hand, mostly stored in one very extensive shed.

La Compagnie Jalbert, Ltd., has been incorporated to carry on a general lumber business; to acquire lumber limits and to operate saw, pulp, rossing, and paper mills; to manufacture and deal in lumber, pulp, and paper pro-

ducts; to acquire water powers; and to carry on a contracting business. Messrs. H. Jalbert, merchant; Thomas Jalbert, contractor; S. Simard, lumber culler, all of Chicoutimi, P.Q., are interested. The capital is $50,000, and the principal place of business Chicoutimi.

Western Canada

The North Canada Lumber Company have opened a branch at Star City, Sask.

The Lake Lumber Company, The Pas, Man., have sold their business to the Finger Lumber Company.

E. M. Joyal, of The Pas, Man., has been awarded a contract to cut 4,000,000,000 feet of timber for Mackenzie and Mann. He will establish winter camps in the vicinity of Chemong, between The Pas and Hudson's Bay Junction.

The Aeroplane Spruce Lumber Company, Limited, has been incorporated, with head office at Vancouver, B. C., and capital stock of $25,000, to carry on business as timber merchants, sawmill, shingle mill, and pulp mill proprietors, loggers and lumbermen.

The Premier Lumber Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $10,000, to carry on business as manufacturers of and dealers in lumber and shingles, shingle mill and sawmill owners, loggers and lumber and shingle merchants.

Quebec Will Extend Its Forest Nursery

During the past year more than 500,000 forest tree seedlings have been shipped from the Quebec forest nursery at Berthierville, P. Q. The provincial forester, G. C. Piche, reports that of these, nearly 200,000 were white pine, 180,000 Norway spruce, 82,000 Scotch pine, 20,000 Douglas fir, 8,000 red pine, 7,000 white spruce, and 6,000 tamarack, the balance being made up of relatively small numbers of other species, mostly hardwoods, to supply the demands of farmers. The great bulk of the demand was, however, for the reforestation of burned-over non-agricultural lands. The Laurentide Company, and the Riordan Pulp and Paper Company were heavy purchasers of plant material from the provincial nursery, in addition to supplies secured from their own nurseries. The Perthuis seigniory also has purchased a large number of small trees from Berthierville annually during the past seven years. To date, the provincial nursery has shipped a total of more than 1,500,000 trees since its inception; of these, more than half have been supplied during the past two years. The demand for planting stock has become so insistent that the provincial forester announces the proposed extension of the capacity of the Berthierville nursery to 3,000,000 seedlings annually. Of these, the majority will be Norway spruce, which is believed to be the most suitable species for pulpwood production.

Speeding Up Southern Pine Output

In connection with the campaign for speeding up the shipbuilding program, President Chas. S. Keith, of the Southern Pine Manufacturers' Association, has sent out the following letter to 1,000 manufacturers of southern pine: "We are engaged in war. Our first duty is to our country and its allies. Material, supplies and food are essential to final victory. Without shipping facilities our cause is lost. It is up to us to see that the wooden shipbuilding program is not delayed, but expedited. Our greatest need is ships, ships and more ships. We must build faster than Germany can sink. Any manufacturer who does not do his part, by going in advance of this logging for the necessary timber and who will not refuse to take orders for material which interfere with government orders is a slacker and a traitor, and is encouraging and assisting our enemies. Under such conditions, the government would be justified in the seizure and operation of his plant in the nation's interest, and the association will encourage and assist the government in such action. No loyal American will thwart such a program, but will aid. We are appealing to you for the best that is in you and the industry."

Encouraging Use of Canadian Timbers in England

A cable from London, England, states that the Executive Council of the Imperial Institute has appointed an advisory comimttee for Canada, consisting of Sir Geo. Perley, Canadian High Commissioner, Sir Robert Kendersley, Governor of the Hudsons Bay Company, J. G. Colmer, former secretary of the High Commissioner's office, J. H. Plummer, of the Dominion Steel Corporation, and Sir Keith Price, of the Ministry of Munitions. One of the most important matters on which action is being taken by the committee is that of the more extensive utilization of Canadian timbers in the United Kingdom. The Imperial Institute Advisory Committee on Timbers, has been taking evidence on this subject. Arrangegments have been made for a series of practical trials of selected British Columbia timbers to be carried out by H. M. Office of Works, with a view to the inclusion of these timbers in official specifications.

WHOLESALE LUMBER
1917 SAWING

1	x 3 in., 6 ft. and up	Merchantable	Spruce	45 M
1	x 4 in.	"	"	350 M
1	x 5 in.	"	"	150 M
1	x 6 in.	"	"	45 M
1¼	x 4 in.	"	"	45 M
1¼	x 5 in.	"	"	105 M
1¼	x 6 in.	"	"	62 M
1¼	x 7 in.	"	"	30 M
2 in. Scant by 5 in., 6 ft. and up		"	"	480 M
" "	6 in. "	"	"	650 M
" "	7 in. "	"	"	525 M
" "	8 in. "	"	"	300 M
" "	9 in. "	"	"	150 M
" "	10 in. "	"	"	75 M

THE McLENNAN LUMBER CO., LIMITED
MONTREAL, QUE.

LOUISIANA RED CYPRESS

QUARTERED OAK PLAIN OAK
POPLAR ASH

Yards at—Nashville, Tenn. Basic, Va. *Mills at*—Sumter, S.C. Winchester, Idaho

We can ship you promptly any of the above Stock, Carefully Inspected

WE WOULD LIKE TO HEAR FROM YOU

WISTAR, UNDERHILL & NIXON
Real Estate Trust Bldg., Philadelphia, Pa.

H. BOURGOUIN
Dominion Express Bldg., 145 St. James St., Montreal
WHOLESALE LUMBER AND TIMBER
Dressed and Rough
White and Red Pine, Spruce, Hemlock, Banksian Pine, Birch, Maple, Dimension Cedar, B. C. Fir, Yellow Pine, Railway Ties, Fence Posts, etc.
Prompt shipment. Satisfactory stock. Good service Write for Prices.
A. F. B. AUSTIN, Manager

"By-Pass" Blower Systems
for green saw dust and wet stringy material

Material that usually clogs the ordinary Blower is handled easily and continuously by our "By-Pass" Blowers. No material passes through or around the fan. That is the big secret of "By-Pass" success. Slow speed and minimum power are other strong features. Write for literature and all details.

We manufacture and install complete systems

Toronto Blower Company
156 Duke St., Toronto

Registered

Trade Mark

FOR SALE

Quebec Birch

6/4 No. 1 Common and Better	5	Cars.
8/4 No. 1 Common and Better	10	"
12/4 No. 1 Common and Better	10	"
8/4 No. 2 Common and Better	5	"
12/4 No. 2 Common and Better	5	"
4/4 Log Run Mill Culls Out	20	"
12/4 Sound Boxed Hearts	5	"
16/4 Sound Boxed Hearts	5	"

Quebec Spruce

2 x 4 x 10/16	Merchantable	2	Cars.
5 x 10/16	"	4	"
6 x 10/16	"	10	"
7 x 10/16	"	2	"
8 x 10/16	"	5	"
9 x 10/16	"	4	"
11 up 10/16	"	5	"
3 x 4/6 x 6/16	Merchantable	5	Cars.
6 x 6/16	"	5	"
7 x 6/16	"	4	"
8 x 6/16	"	8	"
9/11 x 6/16	"	2	"
1 x 4 in. and up 6/16	Mill Cull	5	Cars.
2 x 4 in. and up 6/16	Mill Cull	15	"
3 x 4 in. and up 6/16	Mill Cull	2	"

If any of the above interest you, will be pleased to quote prices

E. M. NICHOLSON & CO.

202 Board of Trade Building

MONTREAL

Australian Timber Trade Shows Decrease

Mr. D. H. Ross, Canadian Trade Commissioner at Melbourne, Australia, in a report dated September 26th, says:—

Victoria is the only state in which annual statistical returns of timber are compiled. While the figures given are only applicable to one state, they are indicative of the decrease in the importation, consumption and stocks held in all the Australian states. The Victorian returns show a consumption of 61,217,000 superficial feet, compared with 93,177,000 feet for the preceding year, a decrease of 34 per cent.

With the exception of New Zealand kauri pine, decreases in consumption are shown in all imported lines of timber.

Particulars of imports and consumption for the year ended on June 30, 1917, stocks held on that date, together with comparative figures for the previous year, are as follows:—

Imports	1915-16 Ft. super.	1916-17 Ft. super
Red deals	2,320,000	.....
Dressed flooring, lining and weatherboards.	10,235,000	1,671,000
Spruce and hemlock	711,000	668,000
Oregon	22,378,000	12,256,000
Sugar and yellow pine	1,389,000	704,000
Redwood	11,773,000	2,909,000
American shelving	33,000	19,000
New Zealand kauri	4,255,000	3,883,000
White pine and rimu	23,697,000	15,798,000
Clear pine	61,000	18,000
Pacific pine	2,034,000	.....
Total	87,886,000	37,926,000
Consumption		
Red deals	1,397,000	921,000
Dressed flooring, lining and weatherboards.	24,460,000	12,545,000
Spruce and hemlock	2,711,000	1,069,000
Oregon	25,416,000	15,064,000
Sugar and yellow pine	1,896,000	1,112,000
Redwood	8,967,000	6,584,000
American shelving	48,000	27,000
New Zealand kauri	3,983,000	4,902,000
White pine and rimu	22,156,000	18,728,000
Clear pine	59,000	20,000
Pacific pine	2,084,000	245,000
Total	93,177,000	61,217,000

Stocks	June 30 1916	1917
Red deals	2,786,000	1,865,000
Dressed flooring, lining and weatherboards.	18,350,000	7,476,000
Spruce and hemlock	996,000	595,000
Oregon	6,650,000	3,842,000
Sugar and yellow pine	2,308,000	1,900,000
Redwood	7,226,000	3,551,000
American shelving	47,000	39,000
New Zealand kauri	5,521,000	4,502,000
White pine and rimu	11,044,000	8,114,000
Clear pine	48,000	46,000
Pacific pine	245,000	.....
Total	55,221,000	31,930,000

Importations of American laths and pickets were 4,499,000 pieces and 441,000 pieces respectively for 1916-17, as against 11,630,000 pieces and 752,000 pieces for 1915-16.

French Hospitals Want Wooden Legs

Among the passengers who arrived a short time ago at an Atlantic port from Spain, on a Spanish liner, was Frederick Voss, a representative of the Association for Trade with America of the department for the manufacture of artificial limbs at Geneva, Switzerland. He said that the hospitals in France are full of maimed soldiers needing wooden legs, and the government was unable to cope with the demand. "The material for making these artificial limbs," Mr. Voss continued, "can be obtained only in the United States, and I have come over to make arrangements for its exportation to Switzerland. The Swiss Government has established a factory at Brienz, with facilities for turning out from 1,500 to 2,000 wooden legs a week. Just before leaving France I met General Maurier, who said that the hospitals are sadly in need of artificial limbs so that they could send maimed soldiers back to their homes and take other injured men into the hospitals in their places."

Lumber firms in Montreal and the province of Quebec have taken a prominent part in promoting and subscribing for the Victory Loan. Besides taking large amounts, many have agreed to carry loans for their employees and also to contribute a portion of the money. Outside of Montreal, the large lumber and pulp companies have materially contributed to the success of the loan. The names include River Ouelle Pulp & Lumber Company, Price Bros., Dobell, Beckett & Co., Louise Lumber Company, Quebec; Williamson & Crombie, Richmond; E. T. Lumber Company, Sherbrooke; John Breakey, Levis.

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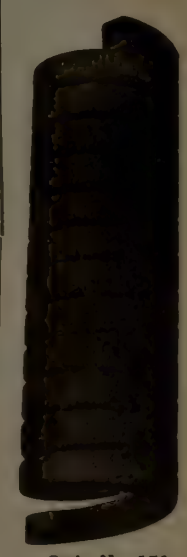
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The Garlock Packing Co.
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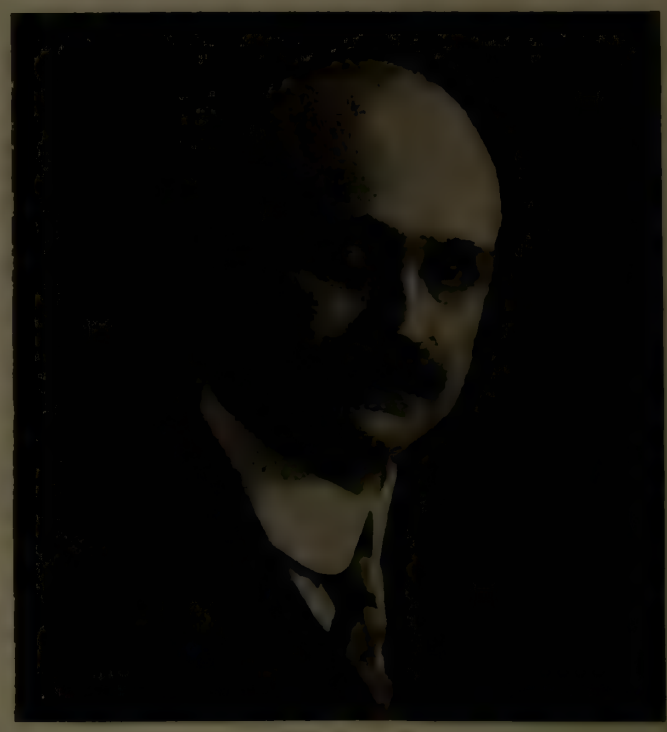

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Constructed Specially for Railroad, Mining Camps and other Heavy Work

No.	Size of Oven	Size of Cooking Surface	Length of Fire Box	Shipping Weight
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535	35 x 27 x 15½	28 x 65	28½	565

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"A Sturdy Heater for Camps"

Steel Body with Cast Legs, Door and Frame

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42	22	42	212
52	22	52	230

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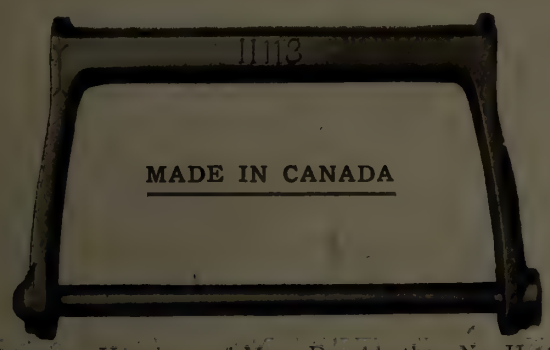

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After the tree is cut down, then comes the expensive process of getting the logs to the mill.
Much of this expense can be saved, and at the same time the work done easier and quicker by the use of Marsh & Henthorn

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MINCE MEAT
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CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:

1 inch No. 1 cuts and better..	53 00	55 00
1½ inch No. 1 cuts and better.	65 00	67 00
2-in. No. 1 cuts and better	67 00	69 00
1½-in. No. 2 C. & B.	53 00	55 00
2-in. No. 2 cuts and better	55 00	57 00
4/4 No. 2 and 3 cuts		36 00
5/4 and 6/4 No. 2 and 3 cuts	45 00	47 00
8/4 No. 2 and 3 cuts	47 00	49 00
1-in. Good Shorts		48 00
1 x 4 and 5 com. and dressing	39 00	40 00
1 x 6 common and dressing ...	42 00	43 00
1 x 8 common and dressing ...	43 00	44 00
1 x 10 common and dressing ...	47 00	49 00
1 x 12 common and dressing ...	49 00	51 00
1 x 10 and 12 mill cull stocks	35 00	37 00
1-in. mill cull sidings	30 00	32 00
5/4 and 6/4 x 4 m.r., m.c. out.	40 00	42 00
5/4 and 6/4 x 5 m.r., m.c. out.	40 00	42 00
5/4 and 6/4 x 6 m.r., m.c. out.	41 00	43 00
5/4 and 6/4 x 8 m.r., m.c. out.	41 00	43 00
5/4 and 6/4 x 10 m.r., m.c. out.	48 00	50 00
5/4 and 6/4 x 12 m.r., m.c. out.	49 00	51 00
2 x 10 common	40 00	42 00
2 and 3 x 12 common	42 00	44 00
1 x 8 inch box and common..	36 00	38 00
1 x 10 inch box and common..	38 00	40 00
1 x 12 inch box and common.	39 00	41 00
1-in. mill run sidings	40 00	42 00
1-in. mill run shorts	33 00	35 00
1-in. mill run Norway	33 00	34 00
2-in. mill run Norway	35 00	37 00
Norway, c. and cf. 1-in.	43 00	45 00
Norway, c. and cf. 1½-in. ...	44 00	46 00
Norway, c. and cf. 2-in.	44 00	46 00
Spruce mill run 1-in. and 2-in.	35 00	37 00
Spruce mill culls	29 00	31 00

Hemlock, No. 1:

1 x 4 and 5-in. x 9 to 16 ft. ..		27 00
1 x 6-in. x 9 to 16 ft.	30 00	31 00
1 x 8-in. x 9 to 16 ft.	32 00	33 00
1 x 10 and 12 in. x 9 to 16 ft.	32 00	33 00
1 x 7, 9 and 11 in. x 9 to 16 ft.	30 00	31 00
1 in. No. 2, 6-ft. to 16-ft.	24 00	25 00
2 x 4 to 12, 10 and 16 ft.	30 00	31 00
2 x 4 to 12 ft., 12 and 14 ft. ..	30 00	31 00
2 x 4 to 12 in., 18 ft.	32 00	33 00
2 x 4 to 12 in., 20 ft.	33 00	34 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	24 00	25 00
Clear in. B.C. cedar, kiln dried	50 00	55 00

Douglas Fir:

Dimension Timber up to 32 feet:

8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	46 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16	47 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.	47 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.	50 00
10x20, 18x20, up to 32 ft.	57 00
6x18, 8x18, up to 32 ft.	52 00
6x20, 8x20, up to 32 ft.	52 00

Timber in lengths over 32 feet subject to negotiation.

Fir flooring, 1 x 3, edge grain..	43 50
Fir flooring, 1 x 4, edge grain..	46 50
Fir flooring, 1 x 4, flat grain..	39 50
No. 1 and 2, 1-in. clear Fir rough	50 75
No. 1 and 2, 1¼ and 1½ in., clear Fir rough	56 00
No. 1 and 2, 2-in. clear Fir rough	52 00
1½-in. No. 1, 4-ft. pine lath.	6 00
1½-in. No. 2 4-ft. lath	5 70
1½-in., 32-in. pine	2 75
1½-in. No. 1 4-ft. hemlock lath.	4 50
1½-in. mill run hemlock lath.	4 25
XX B. C. cedar shingles	3 10
XXX 6 butts to 2-in.	4 00
XXXXX	4 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2 in.		79 00
Ash, white, No. 1 common ...		55 00
Ash, brown, 1sts and 2nds, 4/4		60 00
Ash, brown, com. and bet. ...		48 00
Ash, brown, 1sts and 2nds, 6/4 and 8/4		68 00
Birch, 1st and 2nds, 4/4		58 00
Birch, No. 1 com. and bet., 4/4		47 00
Bich, 1st and 2nds, 6/4 and 8/4		64 00
Birch, 1st & 2nds, 10/4 and 12/4		74 00
Birch, 1st and 2nds, 16/4		82 00
Basswood, 1sts and 2nds, 4/4 ..		51 00
Basswood, No. 1 com. and bet., 4/4	45 00	47 00
Basswood, No. 2 and 3 common		28 00
Basswood, 6/4 and 8/4, 1sts and 2nds	58 00	60 00
Basswood, 6/4 and 8/4, com. and bet.		53 00
Basswood, 4/4, No. 2 com. and bet.		42 00
Soft elm, 1sts and 2nds, 4/4 ..		47 00
Soft Elm, No. 1 com. and bet., 4/4		43 00
Soft Elm, No. 2 and 3 common		24 00
Soft Elm, 6/4 and 8/4, 1 and 2		61 00
Rock Elm, 1sts and 2nds, 6/4 and 8/4		65 00
Rock Elm, No. 2 com. and bet., 6/4 and 8/4		45 00
Soft Maple, 1sts and 2nds, 4/4..		48 00
Soft Maple, com. and bet., 4/4.		38 00
Soft Maple, 6/4 and 8/4, 1sts and 2nds		55 00
Hard Maple, 1sts and 2nds, 4/4		51 00
Hard Maple, com. and bet., 4/4		43 00
Hard Maple, 12/4, 1sts and 2nds	65 00	72 00
Hard Maple, 16/4, 1sts and 2nds	82 00	85 00
Red Oak, plain, 1sts and 2nds, 4/4		62 00
Red Oak, plain, No. 1 com., 4/4		42 00
Red Oak, plain, No. 2 com., 4/4		32 00
Red Oak, plain, 1sts and 2nds, 6/4 and 8/4		75 00
Red Oak, plain, 1sts and 2nds, 12/4 and 16/4	89 00	96 00
White Oak, plain, 1sts and 2nds, 4/4		62 00
White Oak, plain, No. 1 com., 4/4		42 00
White Oak, plain, No. 2 com., 4/4		32 00
Red and White Oak, plain, 1sts and 2nds, 5/4 and 6/4	69 00	71 00
Red and White Oak, plain, No. 1 com., 5/4 and 6/4		46 00
Red and White Oak, plain, No. 2 com., 5/4 and 6/4		35 00
Red and White Oak, plain, 1sts and 2nds, 8/4		76 00
Red and White Oak, plain, No. 1 com., 8/4		52 00
White Oak, plain, 1sts and 2nds, 12/4 and 16/4	89 00	96 00
White Oak, ¼ cut, 1sts and 2nds, 4/4		88 00
White Oak, ¼ cut, 5/4 and 6/4 1sts and 2nds		91 00
White Oak, ¼ cut, No. 1 com.		57 00
Hickory, 1sts and 2nds, 4/4 ...		70 00
Hickory, 6/4, 1sts and 2nds..		77 00
Hickory, 8/4, 1sts and 2nds ..		84 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$[illegible] 00	70 00
1¼-in. and 1½-in. x 8-in. & up	70 00	75 00
2-in. x 7-in. and up	72 00	76 00
No. 2 cuts 2 x 8-in. and up ..	45 00	50 00
Pine good strips:		
1-in.	45 00	48 00
1¼-in. and 1½-in.	55 00	56 00
2-in.	56 00	57 00
Pine good shorts:		
1-in. x 7-in. and up	45 00	50 00
1-in. x 4-in. to 6-in.	32 00	36 00
1¼-in. and 1½-in.	53 00	55 00
2-in.	54 00	56 00
7-in. to 9-in. A sidings	30 00	34 00
Pine, No. 1 dressing sidings ...	42 00	47 00
Pine, No. 1 dressing strips ...	40 00	43 00
Pine, No. 1 dressing shorts ...		36 00
Pine, 1-in. x 4-in. s.c. strips....	34 00	36 00
Pine, 1-in. x 5-in. s.c. strips——	35 00	37 00
Pine, 1-in. x 6-in. s.c. strips....		38 00
Pine, 1-in. x 7-in. s.c. strips....		38 00
Pine, 1 x 8-in. s.c., 12 to 16 ft.	38 00	39 00
Pine, 1-in. x 10-in. M.R.	40 00	44 00
Pine, s.c. sidings, 1½ and 2-in.	38 00	42 00
Pine, s.c. strips 1-in.	34 00	35 00
1¼, 1½ and 2-in.	36 00	37 00
Pine, s.c. shorts, 1 x 4 to 6 in.	28 00	31 00
Pine, s.c. and bet., shorts 1 x 5	30 00	32 00
Pine, s.c. and bet. shorts, 1 x 6	31 00	33 00
Pine, s.c. shorts, 6'-11', 1"x 10"		36 00
Pine box boards:		
1"x 4" and up, 6'-11'	25 00	26 00
1"x 3", 12'-16'	26 00	28 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	28 00	30 00
and up, 6-ft. to 11-ft.	24 00	26 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.		25 00
O. culls r & w p	18 00	20 00
Red Pine, log run:		
mill culls out, 1-in.	28 00	30 00
mill culls out, 1¼-in.	32 00	33 00
mill culls out, 1½-in.	32 00	33 00
mill culls out, 2-in.	34 00	36 00
mill culls, white pine, 1"x 7" and up	30 00	32 00
Mill run Spruce:		
1"x 4" and up, 6' 11'	24 00	25 00
1"x 4" and up, 12'-16'		30 00
1"x 9"-10" and up, 12'-16'	36 00	38 00
1¼"x 7" 8-9" and up, 12'-16'		35 00
1¼"x 10" and up, 12'-16' ...	36 00	38 00
1½" & 2"x12" and up, 12'-16'		40 00
Spruce, 1-in. clear (fine dressing and B)	36 00	38 00
Hemlock, 1-in. cull	16 00	18 00
Hemlock, 1-in. log run	23 00	24 00
Hemlock, 2x4, 6, 8, 10, 12/16' ..	26 00	28 00
Tamarac	24 00	26 00
Basswood, log run, dead culls out	30 00	40 00
Basswood, log run, mill culls out	26 00	28 00
Birch, log run	30 00	32 00
Soft Elm, common and better, 1, 1½, 2-in.	25 00	30 00
Ash, black, log run	32 00	40 00
1 x 10 No. 1 barn	40 00	45 00
1 x 10 No. 2 barn	38 00	40 00
1 x 8 and 9 No. 2 barn		38 00
Lath per M:		
No. 1 white pine, 1½-in. x 4-ft.	5 25	5 50
No. 2 white pine		5 00
Mill run white pine		5 25
Spruce, mill run 1½-in.		4 50
Red pine, mill run		4 75
Hemlock, mill run		4 00
32-in. lath	2 00	2 25
White Cedar Shingles:		
xxxx, 18-in.		5 00
Clear butt, 18-in.		4 00
18-in. xx		2 75
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

Cts. Per Cubic Foot

White Pine

First class Ottawa waney, 18-in. average, according to lineal.	[illegible]	[illegible]
19 in. and up average	85	95

Spruce Deals

3 in. unsorted, Quebec, 7 in. to 6 in. thick per M. ft.	22 00	25 00
3 in. unsorted, Quebec, 4 in. to 8 in. thick, per M. ft.	26 00	28 00
3 in. unsorted, Quebec, 9 in. thick, per M. ft.	30 00	35 00

Oak

According to average and quality 55 ft. cube	78	85

Elm

According to average and quality, 40 to 45 feet, cube	85	95
According to average and quality, 30 to 35 feet	55	65

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, average	22	25
15 inch, average	26	28
16 inch, average	30	35
18 inch, average	35	40

Birch Planks

1 to 4 in. thick, per M. ft.	25 00	30 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.		$74 00
1 in., 8 in. and up wide		83 00
1¼ and 1½ in. and up wide		86 00
2 in. and up wide		88 00

Cuts and Better

4/4 x 8 and up No. 1 and better		58 00
6/4 x 8 and up No. 1 and better		72 00
8/4 x 8 and up No. 1 and better		74 00
6/4 x 6 and up No. 2 and better		61 00
8/4 x 6 and up No. 2 and better		63 00
6/4 x 6 and up No. 3 and better		55 00
8/4 x 6 and up No. 3 and better		59 00

No. 1 Cuts

1 in., 8 in. and up wide		50 00
1¼ in., 8 in. and up wide		60 00
1½ in., 8 in. and up wide		61 00
2 in., 8 in. and up wide		65 00
2½ and 3, 8 in. and up wide		84 00
4 in., 8 in. and up wide		90 00

No. 2 Cuts

1 in., 6 in. and up wide		38 00
1¼ in., 6 in. and up wide		51 00
1½ in., 6 in. and up wide		52 00
2 in., 6 in. and up wide		55 00
2½, 3 and 4 in., 6-in. and up wide..		70 00

No. 3 Cuts

1 in., 6 in. and up wide		33 00
1¼ and 1½ in., 6 in. and up wide		38 00
2 in., 6 in. and up wide		39 00
2½, 3 and 4 in., 6 in. and up wide	45 00	48 00

Common and Dressing Mill Run

1-in. x 4-in.		36 00
1-in. x 5-in.		37 00
1-in. x 6-in.		39 00
1-in. x 8-in.		40 00
1-in. x 10-in.		41 00
1 in. x 12 in.		47 00
1 in. x 13 in. and up		47 00
1¼, 1½ and 2 in.		47 00

No. 1 Barn

1 inch	40 00	52 00
1¼, 1½ and 2 in.	50 00	54 00
2½ and 3 in.		60 00
4 inch		62 00

No. 2 Barn

1 inch	40 00	45 00
1¼, 1½ and 2-in.	43 00	48 00
2½ and 3-in.		50 00

No. 3 Barn

1 inch	36 00	42 00
No. 1, 1, 1¼, 1½, 2-in.		43 00

Box

No. 1, 1, 1¼, 1½, 2-in.	32 00	35 00
No. 2, 1¼, 1½, 2-in.		29 00

Mill Culls

Mill run culls, 1 in.		29 00
1 1¼, 1½ and 2-in.		30 00
No. 2	27 00	29 00

Lath

No. 1, 32-in. pine	2 15
No. 2, 48-in. pine	5 25
No. 1, 48-in. pine	5 75
No. 3, 48-in. pine	4 75
Hemlock Lath, 48-in.	4 75

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac.

Dimension.	S. 1 S. and 1 E.			
	6 ft.	8 ft.	10 ft.	14 & 16 ft.
2 x 4, 6, 8 ..	16 00	19 00	22 50	23 50
2 x 10	20 00	20 50	23 50	24 50
2 x 12	20 00	21 00	25 50	25 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH.

Mountain Stock.

Dimension.

2 x 4, 8, 12, 14, 16	23 50
2 x 4, 10, 18, 20	25 50
2 x 6, 8 to 16	23 50
2 x 8, 8 to 16	28 50
2 x 4-6 and 8 in.; 24, 26, 28, 30, 32 ft.	31 50
2 x 10 and 2 x 12; 8-16 ft.	28 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	30 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	32 50

No. 1 Common Boards.

4 inch	23 00
6 inch	25 50
8, 10, 12 inch	27 50
Mixed widths	26 50

Flooring.

4 or 6 inch No. 1	37 00
4 or 6 inch No. 2	32 00
4 or 6 inch No. 3	26 00

Shiplap—Finished.

6 inch	24 00
8, 10 and 12 inch	25 00

Siding.

6 inch No. 1	37 00
6 inch No. 2	35 00
6 inch No. 3	27 00

Lath.

No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50

PINE—ROUGH TIMBER.

3 x 6 in.; 8 to 16 ft.	29 10
3 x 8 in.; 8 to 16 ft.	28 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	29 00
4 x 10 to 10 x 10, 8 x 8, 6x 12 in. up to 32 ft.	31 00

BRITISH COLUMBIA COAST FIR.

Dimension S1S and E.

2 x 4 in.; 6 and 8 ft.	27 00
2 x 4 in.; 12 and 14 ft.	28 00
2 x 4 in.; 10 and 16 ft.	29 00
2 x 4 in.; 18 and 24 ft.	30 00
2 x 4 in.; 22 and 24 ft.	31 00
2 x 4 in.; 26 to 32 ft.	33 00
2 x 10 in.; 10 to 16 ft.	29 00
2 x 10 in.; 18 and 20 ft.	31 00
2 x 10 in.; 22 and 24 ft.	32 00
2 x 10 in.; 26 to 32 ft.	34 00
2 x 14 in.; 10 to 16 ft.	34 00
2 x 14 in.; 18 and 20 ft.	36 00
2 x 14 in.; 22 and 24 ft.	37 00
2 x 14 in.; 26 to 32 ft.	39 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	30 00
3 x 3 and 3 x 4 in.; 16 ft.	31 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	32 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	33 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	35 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	33 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	33 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	34 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	34 50

FLOORING.

Nos. 1 and 2, 1 x 3 in., E. G.	42 00
Nos. 1 and 2, 1 x 4 in., E. G.	45 00
Nos. 1 and 2, 1 x 6 in., E. G.	42 00
Nos. 1 and 2, 1 x 4 in., F. G.	35 00
Nos. 1 and 2, 1 x 6 in., F. G.	40 00
No. 3, 1 x 4 in.	33 00
No. 3, 1 x 6 in.	38 00

SHIPLAP.

B. C. fir, 6 in.	28 00
B. C. fir, 8, 10, 12 in.; 8 to 16 ft.	29 00
No. 2 shiplap, 6 in.	22 00
No. 2 shiplap, 8, 10 and 12 in.	24 50

FIR, COMMON BOARDS, S1S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	28 00
Common boards, 8 to 12 in.	29 00
No. 2 mixed widths	24 00
No. 2 boards, 8 to 12 in.	25 50

SHINGLES.

XXX B. C. cedar	3 35

LATH.

Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's	4 50
Cedar lath, ⅜ x 1⅜ in. x 4 ft.	5 25

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers, 4/4	$115 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	130 00
Selects 4/4	110 00
Selects 5/4 to 8/4	110 00
Selects 10/4 to 12/4	120 00
Fine common 4/4	80 00
Fine common 5/4	85 00
Fine common 6/4	82 00
Fine common 8/4	85 00
No. 1 Cuts 4/4	63 00
No. 1 Cuts 5/4	72 00
No. 1 Cuts 6/4	73 00
No. 1 Cuts 8/4	76 00
No. 2 Cuts 4/4	45 00
No. 2 Cuts 5/4	59 00
No. 2 Cuts 6/4	60 00
No. 2 Cuts 8/4	67 00
No. 3 Cuts 5/4	47 00
No. 3 Cuts 6/4	47 00
No. 3 Cuts 8/4	48 00
Dressing 5/4	62 00
Dressing 5/4 x 10	65 00
Dressing 5/4 x 12	70 00
No. 1 Moulding 5/4	72 00
No. 1 Moulding 6/4	72 00
No. 1 Moulding 8/4	72 00
No. 2 Moulding 5/4	64 00
No. 2 Moulding 6/4	64 00
No. 2 Moulding 8/4	64 00
No. 1 Barn 1 x 12	61 00
No. 1 Barn 1 x 6 and 8	52 00
No. 1 Barn 1 x 10	54 00
No. 2 Barn 1 x 6 and 8	48 00
No. 2 Barn 1 x 10	52 00
No. 3 Barn 1 x 6 and 8	45 00
No. 3 Barn 1 x 10	43 00
Box 1 x 6 and up	43 00
Box 1 x 10	43 00
Box 1 x 12	44 00
Box 1 x 13 and up	45 00

(Continued on page 58)

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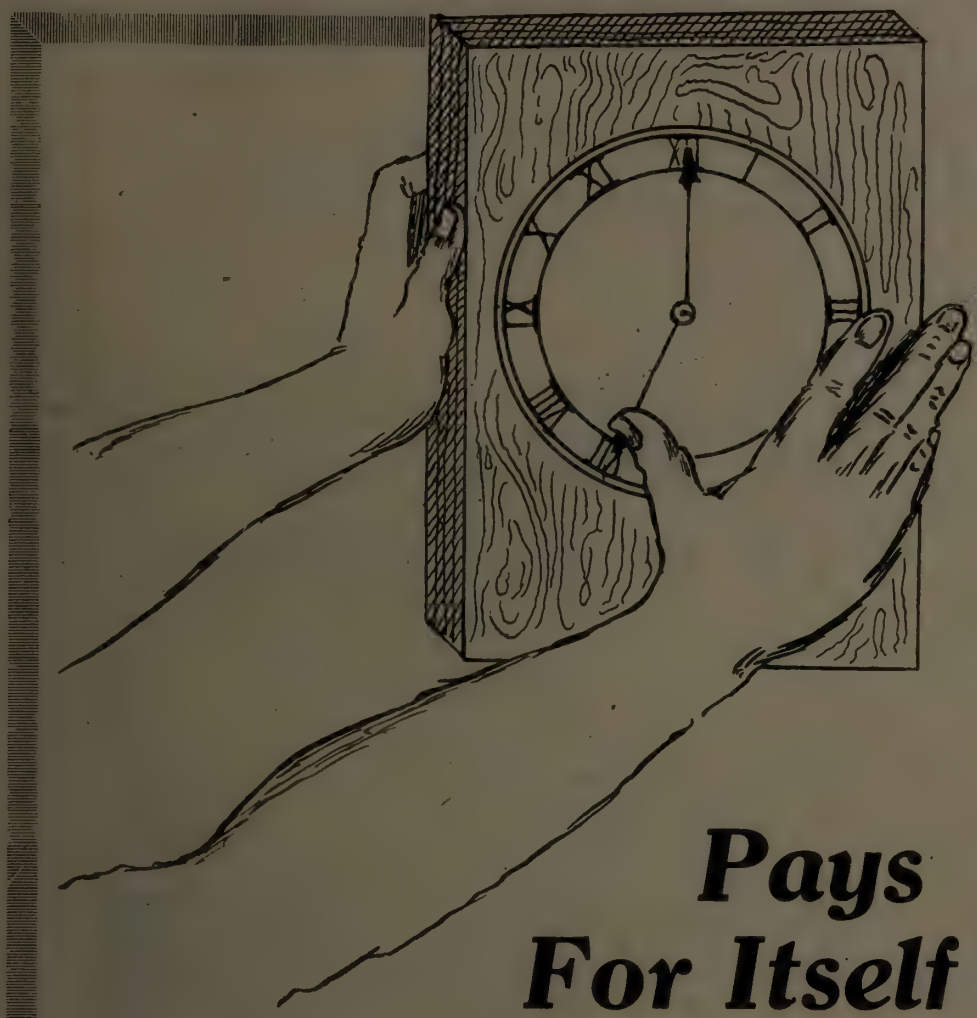

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CURRENT LUMBER PRICES — Continued

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda.

	1s & 2s	No. 1 Com.	No. 2 Com.
MAPLE			
4/4	43 - 45	25 - 27	15 - 17
5/4 to 8/4	55 - 57	33 - 35	17 - 21
10/4 to 16/4	65 - 67	45 - 47	25 - 27
RED BIRCH			
4/4	58 - 60	38 - 40	22 - 24
5/4 to 8/4	60 - 62	40 - 42	24 - 26
SAP BIRCH			
4/4	53 - 55	32 - 34	20 - 22
5/4 and up	55 - 57	34 - 36	22 - 24
SOFT ELM			
4/4	43 - 45	28 - 30	20 - 22
5, 6 & 8/4	45 - 47	30 - 32	20 - 22
BASSWOOD			
4/4	44 - 46	34 - 36	22 - 24
Thicker	42 - 44	32 - 34	22 - 24
PLAIN OAK			
4/4	55 - 57	33 - 35	19 - 21
5/4 to 8/4	56 - 58	29 - 31	17 - 19
ASH, WHITE AND BROWN			
4/4	55 - 57	29 - 31	19 - 21
5/4 to 8/4	65 - 67	34 - 36	20 - 22
10/4 and up	74 - 87	46 - 48	22 - 24

BOSTON, MASS.

Quotations given below are for highest grades of Michigan and Canadian white pine as required in the New England market.

White pine uppers, 1 to 2 in.		119 00
White pine uppers, 2½ and 3 in.		134 00
White pine uppers, 4 in.		144 00
Selects, 1 to 2 in.	106 00	109 00
Selects, 2½ and 3 in.		124 00
Selects, 4 in.		134 00
Fine common, 1 in., 30 per cent. 12 in. and up		78 00
Fine common, 1 x 8 to 11 in.		75 00
Fine common, 1¼ to 2 in.	85 00	87 00
Fine common, 2½ and 3 in.		115 00
1 in. shaky clear		57 00
1¼ to 2 in. shaky clear		60 00
1 in. No. 2 dressing		50 00
1¼ to 2 in. No. 2 dressing		56 00
No. 1 Cuts, 1 in.		60 00
No. 1 Cuts, 1¼ to 2 in.	70 00	75 00
No. 1 Cuts, 2½ and 3 in.		100 00
No. 2 Cuts, 1 in.		49 00
No. 2 Cuts, 1¼ to 2 in.	60 00	66 00
Barn Boards, No. 1, 1 x 12		55 00
No. 1, 1 x 10		52 00
No. 1, 1 8		49 00
No. 2, 1 x 12		50 00
No. 2, 1 x 10		50 00
No. 2, 1 x 8		49 00
No. 3, 1 x 12		48 00
No. 3, 1 x 10		47 00
No. 3, 1 x 8		46 00
Canadian spruce boards		36 00
Spruce, 12 in. dimension		46 00
Spruce, 10 in. dimension		44 00
Spruce, 9 in. dimension		43 00
Spruce, 8 in. under dimen.		40 00
10 and 12 in. random lengths, 8 ft. and up	42 00	43 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7,		34 00
3 x 4 and 4 x 4 in.		38 00
2 x 8 in.		39 00
All other random lengths, 7-in. and under, 8 ft. and up		34 00
5-inch and up merchantable boards, 8 ft. and up, p 1s		33 00
1 x 2		30 00
1 x 3		29 00
1⅝-in. spruce lath		4 60
1½-in. spruce lath		4 25

New Brunswick Cedar Shingles

Extras		4 50
Clears		4 15
Second Clears	3 25	3 50
Clear whites	2 50	2 75
Extra 1s (Clear whites in)	1 75	2 25
Extra 1s (Clear whites out)	1 65	1 90
Red Cedar Extras, 16-in. 5 butts to 2-in.	4 73	4 98
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		5 40
Red Cedar Perfections, 5 butts to 2¼		6 07
Washington 16-in. 5 butts to 2-in. extra red cedar		4 90

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Shingles
and
Lath

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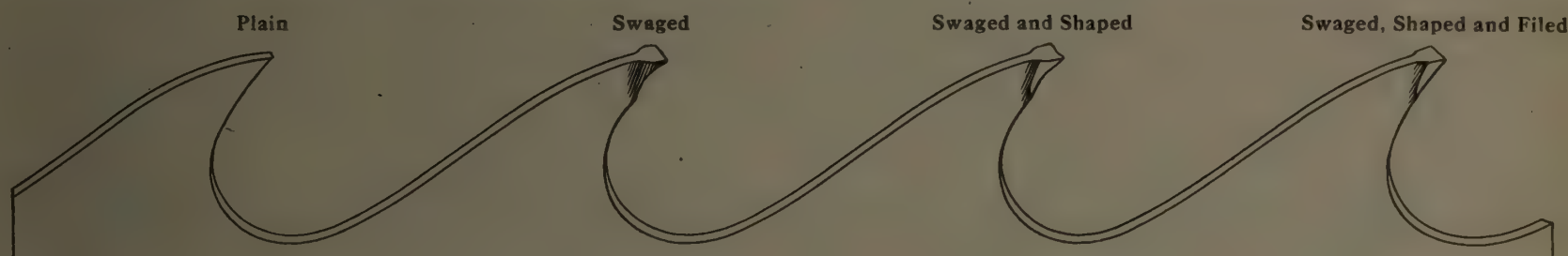

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(Continued on page 62)

The Only Loose Pulley

L. A. DeLaplante Limited

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DOORS SASH AND INTERIOR TRIM

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(Continued on page 64)

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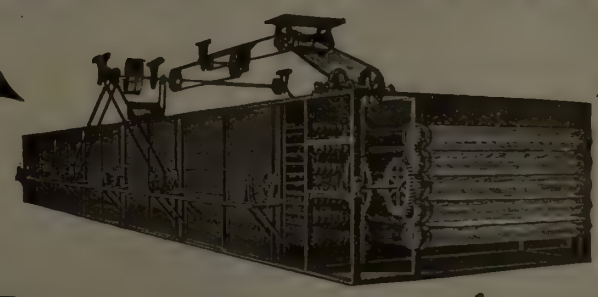

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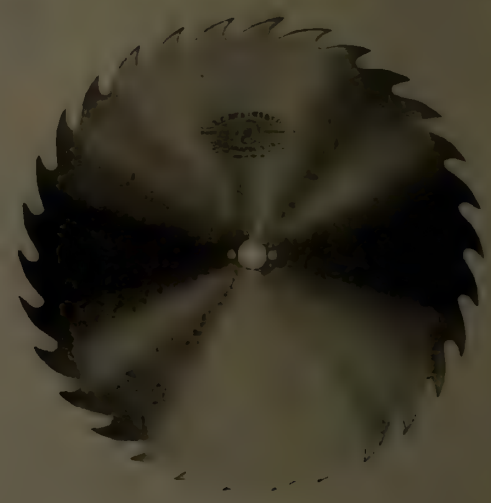
The most advanced improvements in Saw manufacture have placed us far ahead in the manufacture of Saws for all uses.

Our Band and Circular Saws are worthy examples. They cut more timber—do it with less power and require less repair to be kept in perfect condition.



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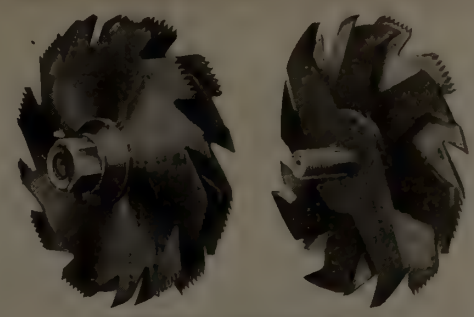

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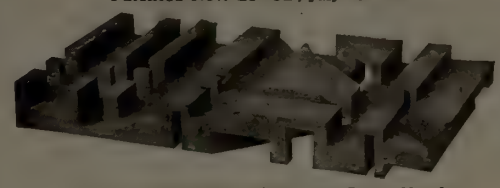

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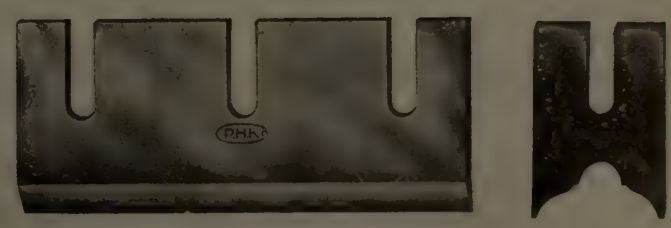

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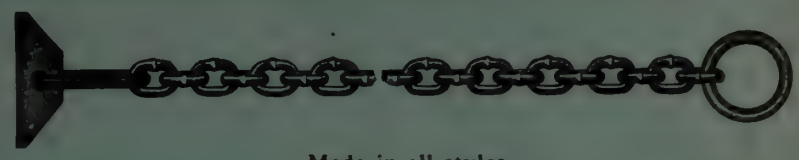

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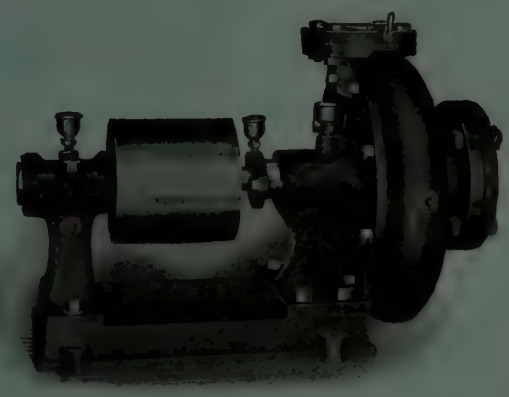

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All iron frame, exceptionally heavy, rigid and strongly braced, top and bottom rolls power driven. Extra wide table.

Carries six 14" saws.

Guaranteed capacity 50,000 lath in ten hours.

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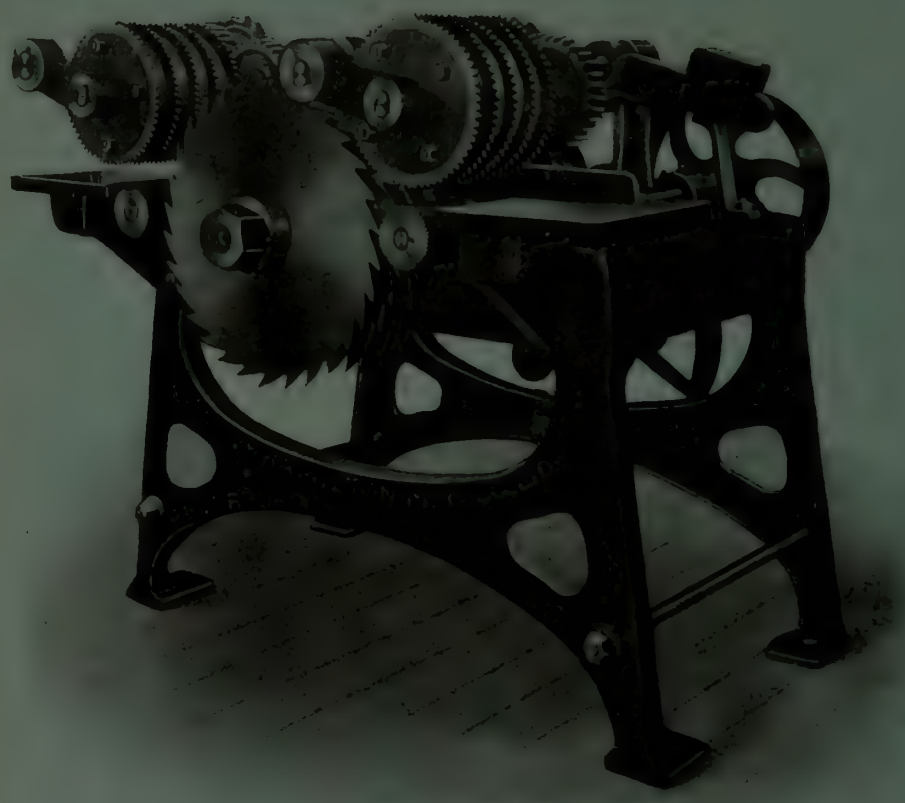

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Carries four 20" saws.

Saws readily changed for filing.

Both of above Machines Carried in Stock

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1916 SAWING

Merchantable

2 x 4 x 10/16	-	33,368'	2 x 6 x 10/16	-	5,459'
2 x 5	-	22,704'	2 x 7 x 10/16	-	77,272'

1917 SAWING

Merchantable

1 x 3 x 10/16	-	128,360'	2 x 4 x 8/16	-	218,053'
1 x 4 "	-	286,212'	2 x 5 "	-	134,920'
1 x 5 "	-	80,514'	2 x 6 "	-	61,630'
1 x 6 "	-	30,004'	2 x 7 "	-	39,586'
1 x 7 and up	-	19,760'	2 x 8 "	-	16,360'
1 x 3 and up x 6/10		33,613'	2 x 9 and up	-	9,000'

Mill Culls

1 x 3 and up x 6/16 - 47,200' 2 x 4 and up x 6/16 - 62,500' 3 x 6 and up x 6/16 - 118,819'

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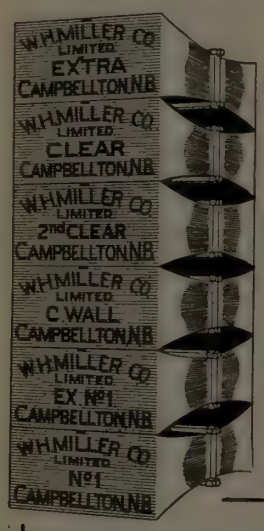

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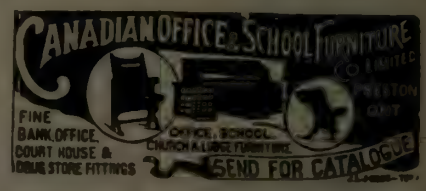

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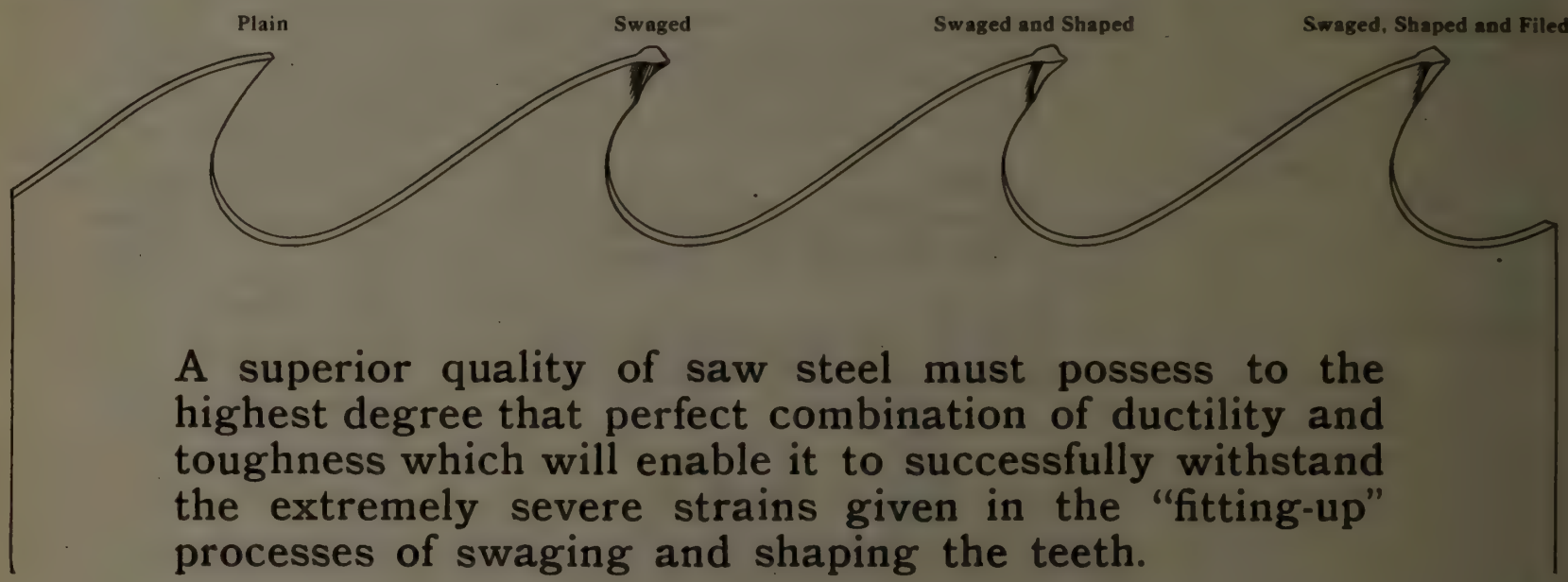

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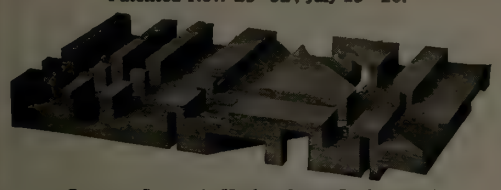

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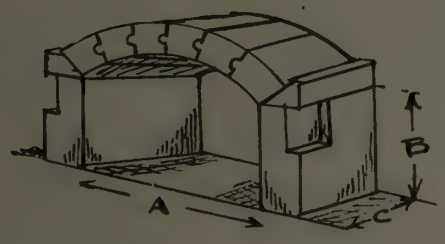

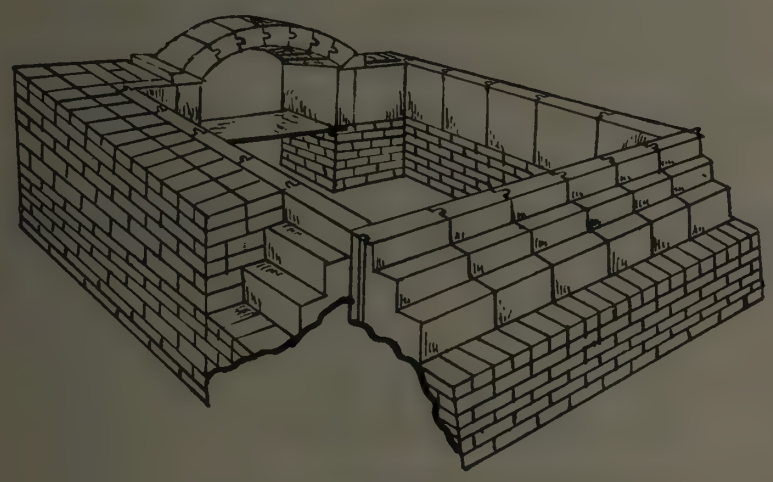

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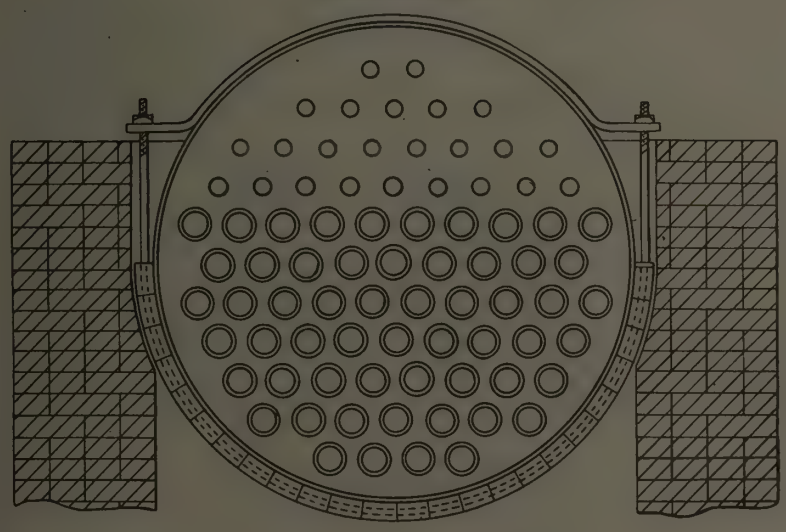

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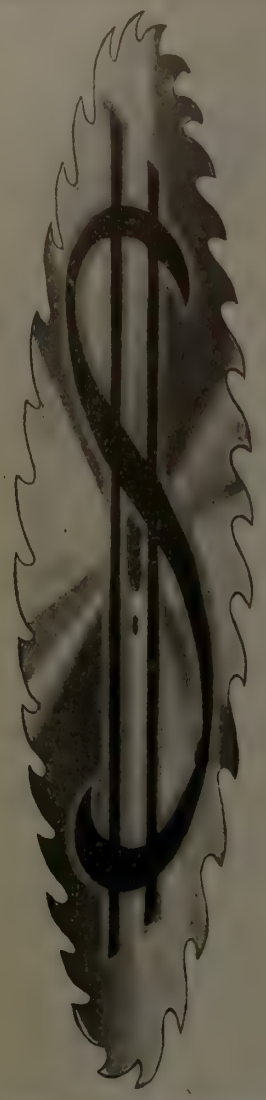

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Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

HUGH C. MACLEAN, LIMITED, Publishers

HUGH C. MacLEAN, Winnipeg, President.
THOS. S. YOUNG, Toronto, General Manager.

OFFICES AND BRANCHES:

TORONTO - - Telephone A. 2700 - - 347 Adelaide Street West
VANCOUVER - - Telephone Seymour 2013 - - Winch Building
MONTREAL - - Telephone Main 2299 - - 119 Board of Trade
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CHICAGO - Telephone Harrison 5351 - 1413 Great Northern Building
LONDON, ENG. - - - - - - - - - 16 Regent Street, S.W.

TERMS OF SUBSCRIPTION

Canada, United States and Great Britain, $2.00 per year, in advance; other foreign countries embraced in the General Postal Union, $3.00.
Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster-General for Canada, for transmission as second-class matter.

Entered as second-class matter July 18th, 1914, at the Postoffice at Buffalo, N.Y., under the Act of Congress of March 3, 1879.

Vol. 37 **Toronto, December 15, 1917** **No. 24**

The Organization Movement in the Lumber Trade

Organization arrangements in connection with both the retail and the wholesale lumber trade of Ontario have made much headway during the past month or two. In previous years it has been a difficult matter to interest Ontario lumbermen in any plans for forming an organization to promote their mutual interests, but examples of successful organization elsewhere and conditions which have arisen on account of the war have brought home to lumbermen the wisdom of co-operative effort in dealing with those trade problems that are too large for individual handling, or in connection with which results are only possible when backed up by the force of numbers. There never was a time when the advantages of organization were more clearly apparent than they are to-day, and, probably for this reason, it has been an easier matter of late to interest lumbermen in proposals of this nature. Moreover, the ground-work of association effort has been well done elsewhere, and those who are working out the plans for the retailers' and the wholesalers' organizations have definite schemes to work upon. Conditions, therefore, are favorable for the organizations which are now under discussion, and which will probably have been definitely put into operation within the next month. The plans have been worked out, and many members of the trade are enthusiastically advocating the movements. It remains only to complete the organizations and to enlist the support of a sufficient number of hard workers to ensure good progress after organization has been completed. It even looks as though those who have already been working are of sufficient influence to ensure success.

The plan which is being worked out by the retailers of Ontario is to form five local associations, covering well-defined groups, whose interests and trade conditions are mutual, and that each of these local associations shall be represented in a general or central association, with headquarters probably at Toronto, which will look after matters of general interest to all retailers in the province. Roughly, this plan is the same as that which has been worked out successfully in the United States, and is the basis of our own governmental system in Canada. An organization based on these ideas puts upon everybody concerned a share of the work and responsibility and maintains interest continually so as to avoid the old difficulty in connection with many of the earlier-formed associations, namely, that everyone left the work to a central committee and the proceedings dwindled down to the holding of an annual meeting. The secret of association success is in maintaining interest all the time. There are so many ways in which this can be done for a retail association that the outlook is quite promising. A simple outline of the matters to be attended to will indicate this. Such matters must be handled as transportation credits, cost accountiing, advertising, insurance, better acquaintance with competitors, plan book service, training course service, etc., all of which have been handled successfully elsewhere and will no doubt be taken up by the Ontario association as soon as possible. The organization meeting of the Ontario retailers will be held in the afternoon of Friday, December 21, at Toronto. A notice regarding it appears elsewhere in this issue.

The wholesale lumber dealers of Toronto have made good progress also in connection with their organization plans, and have enlisted sufficient interest among the wholesale trade, both in Toronto and in other parts of the country to warrant them in organizing an association without delay. Their organization meeting will also be held at Toronto on Friday, December 21, after a dinner at the Albany Club, in the evening. The plan which is under consideration is to form an association quite similar to the National Wholesale Lumber Dealers' Association of the United States. A constitution and by-laws have been prepared, which will be submitted at the meeting on December 21. The scope of the association proposed will include the creation of a bureau of information for securing credit reports, handling transportation matters, legislation, inspection, arbitration, etc. The first meeting held in Toronto was very fully attended, and it is probable that the next meeting will see the association definitely formed and ready for operation.

Unquestionably these two associations, if they are supported as they deserve, will be of great assistance to the trade. The support already assured, moreover, indicates that there is little doubt about their future.

Ontario's Unsatisfactory Mechanics' Lien Act

The Mechanics' Lien Act of Ontario is far from an ideal piece of legislation from the point of view of the individual or firm which supplies material or labor for the erection of a building. From a contractor's or from an owner's point of view it is good enough, but a study of the act, in comparison with the lien laws in force in some of the states of the United States of America, readily reveals the inherent injustices of the Ontario Act, and shows how the latter could be improved. It would be difficult to conceive of an act planned more definitely than the Ontario act to favor the speculative builder, the careless or dishonest contractor, of the selfish or dishonest owner who desires to have a building erected at the least possible cost, irrespective of the losses which may be involved upon those who supply the material and the labor. The Ontario act is a striking example of much that is bad in this connection, while the act now in force in the State of Ohio, which is being copied in several of the other states, is an equally striking example of an act drawn up with a view to affording justice to all parties concerned and giving everybody a fair opportunity to make a living out of his labor or investment.

Briefly, the Ontario act provides that the owner shall pay to the contractor, as the building progresses, 80 per cent. of the amount certified to by the architect as having been earned, and that he shall retain 20 per cent. of this amount and of the amount of the "extras," in order to satisfy the claims for material and labor which may remain unpaid. If the owner complies with this requirement he is relieved of all liability, and, therefore, from his point of view, the act is an exceptionally satisfactory one. The contractor, on account of the fact that he is entitled to receive 80 per cent. of the amount earned and that the

remainder is assured to the material man and the workman, also looks with favor upon the act, as it involves him in no particular danger, so long as he conducts his business carefully, while it puts into his hands, if he happens to be dishonest, a large sum of money with which to juggle his payments or even to dispose of them in other ways, if he can put off the material man or the workman with notes or promises. The act actually encourages the contractor in ways that are unbusiness-like and dishonest, instead of providing for the protection of those who furnish the material and do the work. When a contractor has accepted a job at too low a price and the situation develops in which the lien law is supposed to afford protection to the material man and the laborer, the Ontario law makes it possible for the contractor in many cases to get away without loss and to leave the material man and the workman to bear the burden.

It is a great undertaking to bring about any changes in the existing Mechanics' Lien Act. It has come to be looked upon as of a semi-sacred character, not to be disturbed if there is any way to avoid it; but the situation in Ontario seems to demand a change, both in the interests of justice and for the protection of many important lines of industry and trade. The Ohio law, while it may still be open to improvement, affords an excellent example for the revision of the Ontario law. The principle of the Ohio law is entirely different from that of Ontario. It seeks to place the responsibility where it properly belongs and to give protection to the parties who should have it. The Ohio law provides that when a payment becomes due to a contractor the owner shall require an affidavit from him showing all the names of unpaid laborers and the amounts due to them, and all the names of material men and the amounts due to them, accompanied by certificates. Similar affidavits are required in connection with sub-contracts. When he has received these affidavits the owner must pay what is due, making the payments to the sub-contractors, material men, and laborers direct, not to the chief contractor. Then the balance of the amount due can be paid to the chief contractor, unless notices have been filed with the owner showing amounts due, which do not agree with the amounts shown in the affidavit.

This law applies to private contracts only. Its theory is that the owner holds the contract price in trust for those who have enhanced the value of his property by their labor and material. To guarantee the performance of that trust a lien is created on his property, and to enable him to perform his obligations he is required to demand, before paying his head contractor, an affidavit showing who performed labor and is unpaid, and who furnished material and the amount due, if any. The owner makes payment direct to those entitled, or withholds the money until all adjustments are made. The affidavit, whether true or false, is the owner's absolute protection, but material men and laborers can, at their option, serve notices on the owner which prevent loss through fraud.

To make the law more uniform in practice and to simplify its operation a form of affidavit is written into the statutes. The Ohio law does not, nor should any law, remove the duty of exercising care in the extension of credit. It does not seek an absolute certainty of payment, but it has proved to be satisfactory to everybody, and has removed from the building business a great deal of its speculative and uncertain commercial character. The Ontario law has almost none of these advantages. It is satisfactory to practically no one but the careless or dishonest contractor. It does not remove any of the uncertainties of the building business, but encourages speculative building and unsafe estimating by contractors, while it leaves the material man and the laborer at the mercy of any one who is able to secure credit, if he wishes to take advantage of the opportunities which the law affords him of taking great risks at somebody else's expense. It would be a wise move on the part of the material man to endeavor to enlist the assistance of all who are concerned in having the Ontario lien law amended so as to embody features similar to those of the Ohio law.

Forestry Service Appointments to be Freed from Politics

A recent announcement from Ottawa stated that the Dominion Government had definitely pledged itself to place the entire outside service of the Civil Service in charge of the Civil Service Commissioners at Ottawa. To the average citizen who is not in touch with the working of the Civil Service this statement may not carry much meaning, but to those who know something of what in involves it is recognized as a radical change in the method of making appointments to the Civil Service, a change which must produce important and beneficial results. There can only be one interpretation of such a pledge, namely, that the government intends to do away entirely with the bane of political interference with appointments to the outside Civil Service. Anyone who has not concerned himself closely with politics may wonder that political influence should be permitted to affect appointments to the extent of injuring the usefulness of the service, but the fact remains that the best friends of the government, as well as its strongest critics —irrespective of what party may be in power—have always admitted that the efficiency of the service was far below what it should be, on account of the patronage system of appointment, which has been taken for granted as a necessary factor in the management of the service, and which has made it possible, and of frequent occurrence, that an applicant with political influence could get a position without regard to the fact that better men who have no political influence are available. The result has been the impairment of the service in many of its most vital respects.

Probably in no other branch of the outside service has this been more the case than in connection with the Forest Branch of the Department of the Interior, and it is encouraging to learn that merit is to be the basis of appointment in future, and that the task of making the change in the system of appointment has already been taken in hand. It is to be hoped that it will be pushed through to completion in the very near future. Political interference has played havoc with the technical services, such as the Dominion Forest Branch in the past, and the readers of the Canada Lumberman, representing the lumbermen of Canada, who are so intimately affected by the efficiency or inefficiency of this service, will be glad to know that in future it will be composed of men who are specially fitted for their work.

The Dominion Forest Branch administers the forests of the three prairie provinces and a forty-mile strip bordering the railways in British Columbia. The head office staff of the branch is subject to the rules of the Civil Service Commission. The outside service of the branch, however, has always been to a serious extent the plaything of local politics. It has been a frequent custom to appoint fire rangers upon the recommendation of the patronage committees, and there have been instances where positions calling for technical training have been filled by political nominees absurdly unfitted for the duties of the post. This means that whatever party has been in power at Ottawa, the responsible officers of the Dominion Forest Branch have not been selecting their own ranger staffs in the main, nor has it been possible to bring the employees under a discipline that assures efficiency of service and economy of money. Even in times of peace there was no excuse for this. It was simply one of those evils of our government system which the public imagined could not be remedied, and which successive governments preferred to leave alone.

The pledge which the Dominion Government has given upon this subject ought to be translated into action at once and the old system never allowed to return. An order-in-Council is all that is needed in the way of legislative effort to make the pledge effective. While the situation does not affect the Eastern provinces definitely, the Western provinces will gain immensely through a stronger and more alert forest service which can reduce the fire losses and render the general management of our forests more efficient and conomical. The importance of having capable men appointed to the Forest Ranger Service has been amply demonstrated by some of the provinces of Canada and by several of the states of the Union. It will mean much to the lumber industry of Canada and to the Forest Service if this reform is put through immediately and the Dominion takes its place among those who are promoting the efficient management of the country's forest resources.

Treason Demands Ruthless Suppression

Handling the alien enemy population of Canada has been a difficult problem for the government ever since the commencement of the war. Every now and then some new outbreak of enemy viciousness shows the danger of temporizing with this class of criminals and traitors. The occurrences at Kitchener, Ont., and in Quebec Province are fresh in our minds at present, and are evidences of disloyalty that should be handled without gloves. It is not to be wondered at that the loyal citizens of Kitchener indignantly demanded, and finally secured, an apology to Sir Robert Borden for the treasonable conduct exhibited by some of the people of Kitchener who made it impossible for him to address a public meeting there. Nor is it any wonder that the loyal citizens of other parts of the County of Waterloo commenced a movement for separating from that portion of the county in which Kitchener is situated, and having the county seat of government located in Galt or elsewhere. This would be the only natural outcome of persistence in disloyalty.

Without seeking to compare Canada unfavorably with the United States in matters of this sort, it is worth while looking at the way in which the United States Government is dealing with the efforts of the I. W. W. and other friends of the Kaiser in the United States to cripple the airplane and shipbuilding timber production on the Pacific Coast. A conference was held recently at Seattle, Wash., at which Secretary W. D. Wilson of the Department of Labor, Col. B. P. Disque and Capt. R. Hawkins of the United States Army Signal Corps met nearly 150 lumbermen of Western Washington. The object of the conference was to speed up production of spruce and fir for airplane and other war uses.

Ever since the strike of mill workers and loggers, which began last July 16, and the months of close down, the intimidation and sabotage that followed have made it impossible to speed up the spruce production to fill the government's needs, and whereas 5,000,000 feet a month has been the maximum furnished the government and its allies instead of 10,000,000 feet a month, as required, the total output must be increased to 15,000,000 feet a month for some time to make up for the shortage in supply to date. While the manufacturing of lumber on the north coast has been brought up to 85 per cent. of normal, the shortage has been confined to the districts producing spruce lumber, particularly for government purposes, as well as to some sections where fir airplane material and shipbuilding lumber are being gotten out, indicating that the slowing up of production by a certain class of labor is due to the sinister hand of an alien enemy, and it has been admitted that the millmen and loggers have been powerless to cope with this influence without assistance from the government.

Colonel Disque announced at the conference that by December 15 he would have 8,000 to 10,000 soldiers in the logging camps getting out spruce lumber, these soldiers being practical loggers partly from Washington and Oregon and partly from the timbered regions of Minnesota, Wisconsin, and Michigan. They will supplement the crews of men already at work logging spruce, and will speed up production to the point required by the government. This was the first definite announcement made by Colonel Disque of his plans for assigning troops to the forests, and it had a cheering effect on the loggers and millmen present who have been working against countless difficulties in an endeavor to make good their promises and carry out their patriotic desires to aid the government in every possible way, and particularly by furnishing the needed spruce airplane lumber.

This is the only way to deal with men of such character. They must be handled ruthlessly, and as the ideal they worship is that of force, they should be shown that force will be used unsparingly in preventing their sinister methods from bearing fruit.

Editorial Short Lengths

Dr. C. D. Howe, of the Faculty of Forestry, University of Toronto, has been engaged in making a study, on behalf of the Commission of Conservation, of the reproduction and growth of pulpwood species after logging in the St. Maurice Valley, Quebec. The investigation has not yet been completed, but a preliminary report was made by Dr. Howe, before the annual meeting of the commission at Ottawa on November 27. Some rather startling facts were disclosed regarding the reproduction of pulpwood species on cut-over lands. Valuable co-operation in the investigation was furnished by the Laurentide Company and the Quebec Forest Service. Sufficient information has already been furnished to show the radical misconception of the facts prevalent amongst those who think and assert that the pulp forests reproduce themselves by annual growth within short periods of time. As a matter of fact, the actual growth in the forest is very, very small. The larger coniferous trees are cut out. The hardwoods remain. The hardwoods, with their heavy crown cover, shade the young spruce and balsam trees to such an extent that their growth is almost incredibly slow. The successful cuttings which lumbermen tell of over the same territory, when analyzed, tell a story that is the reverse of satisfactory. It shows that, instead of the forest being reproduced, the successive cuttings have been eked out by cutting smaller trees and by increasing the cut of balsam instead of spruce. Investigation has already gone far enough to disprove absolutely the frequent assumption that such lands can be cut over every twenty years and the same amount of material secured as before. One heavily-culled lands it will probably be found that henceforward a period of from thirty to sixty years must elapse between cuttings if only spruce and balsam are to be removed.

Reliable estimates of the amount of timber which has gone into the shoring up of trenches and dugouts, into the miles and miles of trench sidewalks and corduroy roads, and into artillery and trench screens are not available, but the quantity, on the hundreds of miles of front surely totals up to several hundreds of millions of feet. On the statement of a French colonel, it is learned that as high as 30,000 trees were used daily by a single French army corps.

Wood products are a very important factor entering into the manufacture of munitions, for without charcoal, black powder, used in such large quantities in explosives, especially shrapnel, would be denied us. Rosin, a product of our Southern yellow pine forests, is used by the thousands of barrels in the manufacturing of shrapnel, serving to hold the bullets in position in the explosive shell head. Acetone and alcohol, essential to the manufacturing of high propellant explosives, are a product of wood distillation, while muriatic acid, sulphuric acid, and chloroform are products secured from the refuse of our pulp mills. It may also be a surprise to some that one of the lard substitutes, which many housewives use in their kitchen, may be and is provided in limited quantities from the wastes of some of our pulp mills.

Wood converted into pulp has countless uses, and its manufacture bids fair to become one of the most important forms of industry related to our forests. For war purposes we find pulp converted into paper shirts for Russian soldiers, vests, socks, and handkerchiefs for the civilian population in Germany and Austria, into blankets and clothing padding, into a soft, absorbent substitute for cotton for surgical purposes, and into a tough paper for surgical dressings and boards for splints.

The wood cellulose is also reported to be in extensive use in Germany as a substitute for cotton, in the manufacturing of a gun-cotton. In our own country wood pulp is now used for making string, fibre board, chairs, insulation pipes for electrical purposes, car wheels, and a thousand and one other purposes.

Newfoundland operators report that they are having much difficulty in obtaining a sufficient number of men to operate their camps, and that, although higher wages are being offered continually, the scarcity continues.

Ontario Retail Association Progressing

Committees Appointed by Each Local District for General Meeting of Provincial Retailers—Western Ontario Trade Enthusiastic

A meeting of retail lumbermen of the district of Western Ontario was held at Hamilton, on December 3, for the purpose of considering the proposal to form a Western Ontario retail lumber dealers' association, as part of the proposed general Ontario retail lumber dealers' association. The meeting took place at the Royal Connaught Hotel, and was preceded by a luncheon. Mr. Thomas Patterson, of the Patterson-Tilley Company, Hamilton, occupied the chair, and the others present were: H. Crosthwaite, Patterson-Tilley Company, Hamilton; M. Cole, Cole Lumber Company, Hamilton; J. H. Rutherford, Cole Lumber Company, Hamilton; H. McDonald, Barton Lumber and Supply Company, Hamilton; C. C. Lawson, Wise Lumber Company, Hamilton; C. H. Taylor, Hamilton Lumber Company, Hamilton; Guy H. Long, Long Lumber Company, Hamilton; M. Zimmerman, Consumers' Lumber Company, Hamilton; E. Hind, Beaver Iumber Company, Hamilton; C. C. Smith, J. J. Smith & Sons, Hamilton; Fred Taylor and W. J. Atichison, D. Aitchison & Co., Hamilton; S. J. Shirton, Dunnville; S. Leggatt. Gibraltar; A. S. Nicholson, Burlington; Joseph Bowman, Dundas; W. C. Laidlaw, Laidlaw, Laidlaw Lumber Company, Toronto, and H. Boultbee, editor of the Canada Lumberman, Toronto.

Mr. Patterson opened the business meeting by explaining the proposal for the formation of an organization. He stated that there were five local organizations to be formed in Ontario, all of which would send representatives to a general meeting to be held at Toronto at an early date for the purpose of forming a general association to cover the whole of the province. The plan is that the general association shall take charge of such matters as are of mutual interest to retailers throughout Ontario, and that the more local affairs shall be dealt with by the local associations. It is believed that a plan of this nature will work out satisfactorily, and that many matters now neglected can be dealt with effectively so as to promote the well-being of the whole trade.

Hamilton Trade All Ready

Mr. Patterson believed that all the members of the trade in Hamilton were in favor of this proposal and that already a large number of others in the other parts of the western district were in sympathy. He suggested that all the members present should express their opinions upon the subject, and that then they should attend to the necessary passing of motions to put the matter in formal shape. First of all he called upon Mr. Walter C. Laidlaw, of Toronto, who has been taking much interest in the proposal and has been instrumental in developing it in the other four districts of the province.

Mr. Laidlaw spoke briefly, outlining the movement and referring to the various matters that such an association will be able to deal with. He drew attention to the fact that organizations existed in almost every other line of business except the lumber business. The insurance companies, banks, and even the churches, were thoroughly organized, but lumbermen, particularly the retail lumbermen, were still working on the individual plan and neglecting the great benefits of co-operation. Although lumbermen had not done much in the way of getting together, there was now a feeling among many dealers in Ontario that the time had come for doing so. He believed that there were now quite a sufficient number of dealers in the province in favor of forming a body which would represent this important branch of the lumber trade. There were a number of matters that such an organization could deal with more successfully than individuals. Legislation, for instance, could be carefully watched, so that the interests of the retailers would be promoted instead of being neglected. Transportation matters could be centralized with the association in such a way that it would be possible to obtain much more satisfactory service. There were many other matters which could be similarly dealt with to the mutual benefit of all the trade.

Mr. H. Boultbee, Toronto, followed Mr. Laidlaw, and dealt more in detail with the activities of the proposed association, which would include, in addition to transportation and legislation problems, such matters as insurance, credit bureaus, standardizing of costs, plan books, lumbermen's training courses, advertising, etc.

Mr. Patterson then referred briefly to the necessity for adopting a set of grading rules, so that they might know what kind of stock they were ordering and avoid the disputes that were now so frequent on account of misunderstanding in regard to grades. He referred particularly to the matter of matching, calling attention to the fact that frequently tongue and groove stock obtained from one mill did not match that from another mill. He thought that an association of retailers could advantageously take up this matter and induce the manufacturers to standardize their matching.

Publicity for Retailers

Mr. Guy H. Long, Hamilton, stated that he had frequently visited Buffalo, Detroit, Chicago, and other United States cities, and had been greatly impressed with the benefits from organizations among the trade. In the matter of advertising, for instance, he noticed that some of the United States associations were pooling their efforts so as to produce greater results, and were educating the public up to a much greater appreciation of lumber as a building material. This was precisely the class of work that a retail dealers' association could take up in Ontario with much benefit. Standardizing their cost accounting systems was another matter of importance in connection with which they ought to co-operate. How many dealers in Hamilton, for instance, knew exactly what it cost them to do business? He thought the number was very small. If they would co-operate in the study of this problem, they would undoubtedly be able to work out extremely valuable cost information. The retail lumber dealers all had their troubles with the railway companies. As individuals they were able to accomplish practically nothing. They could simply lay their facts before the railway company or the car service bureau, and accept whatever kind of treatment was handed out to them. If they were able to go before the railway companies or the Dominion Board of Railway Commissioners as an organized body they would undoubtedly exert far more influence and frequently obtain results that would otherwise be impossible.

Then there was the matter of developing a more friendly feeling among the members of the trade. Even if they did nothing else but increase their confidence in one another they would be accomplishing something of great value. Through an organization they would immediately begin to get closer to one another as business friends. The time had gone by when it was considered a good business policy to knock one's competitor. To-day they had to get together if they wanted to progress. The benefits they would thus receive from an association would more than pay for the time and trouble and expense devoted to it, and their business dealings would be rendered iinfinitely more pleasant.

Mr. S. J. Shirton, Dunnville, expressed his strong approval of the plan to organize. He believed it was a move in the right direction and would be a great benefit to everybody. The retail lumber dealers had been far too slow in coming to a realization of the truth of the old adage, "United we stand, divided we fall." There were forces working against the interests of retail lumber dealers which were too great for them to handle, but which they could overcome in many cases if they were united. An example in connection with transportation troubles was one which had recently come to his attention. A certain carload of lumber which he had purchased turned out to be overweight, and the railway company insisted upon being paid for the excess on a "less than carload lot" basis. This was a new idea to him, and it seemed to him that the railway had no right to charge in this manner; but as an individual his chances of having the matter settled in the way he thought proper were very slight. Another matter that he thought it would we well for an association to handle was that of advertising. It was remarkable how much money was being spent by the manufacturrs of substitute roofing materials, which were making great inroads on the market for cedar shingles. He was convinced that the cedar shingle was by far the best kind of roofing material that anyone could use, yet it was losing its market because it was not aggressively advertised. As an association they would be able to put on an advertising campaign of this nature and get results.

Co-operation With Architects

Mr. A. S. Nicholson, Burlington, referred to the importance of co-operating with the architects. As individual lumbermen they could do nothing of this kind, but as an organization they would be able to enlist the interest of the architects, and would probably find them very ready to co-operate in many ways. A case in point was one which came up in his business a short time ago. A contractor had asked him to figure on a bill, and he did so, telling the contractor at the time that he was figuring on using stock doors. Finally, when he got the bill, he found that, although the door specified was very similar to the stock door on which he had figured, there was just enough difference in detail to make the cost on the house $56 greater. Having taken the precaution to warn the contractor on this point in advance, he got out of this difficulty all right and the contractor was stuck, but Mr.

Nicholson himself had been stuck many times previously on similar transactions in which he had not been so careful.

Mr. Nicholson was convinced that the retail lumber dealers were carrying far too many lines. For instance, their stock included a great many kinds of moulding. He was sure that they had much moulding on hand which was really dead stock, and he did not know how they would ever get rid of it unless it burned up. This way of doing business was unwise, and was one of the reasons why retail lumbermen, although they worked just as hard as anybody else, were not making as much money as other business men.

Mr. W. J. Aitchison and Mr. Fred Taylor, of D. Aitchison & Co., Hamilton, also spoke briefly.

Mr. Walter C. Laidlaw again spoke for a few minutes, saying that there were a great many retailers who were not yet educated up to the association idea, and on account of these it would possibly be a rather slow matter to get the association up to anything like its possible limit of membership and efficiency. The retail lumber dealers were the foundation of the lumber industry, and it was of great importance that an organization of this sort should be carried out, and that all those who took an interest in its formation should also take a very definite interest in the hard work that would be necessary in order to carry it along until it became as important and successful as it deserved to be. The importance of the retail lumber trade was based largely upon the fact that it reached the ultimate consumer. For this reason he thought that the retailers ought to be able to lay down the rules for guiding the welfare of the trade far more definitely than they had been doing in the past. In short, they ought to be able to tell both the wholesaler and the consumer that they bossed the situation.

The chairman then called for a vote upon the advisability of organizing and all present indicated their approval of the plan.

Western Ontario Committee

A lengthy discussion followed in regard to the appointment of a committee to represent the Western Ontario district at the general meeting. The desire was that the committee should be as representative as possible, and that it should also be composed of men who were ready and willing to do their utmost to bring about the success of the movement. The committee as finally selected consisted of Messrs. Thomas Patterson, Hamilton, convener; W. J. Aitchison, Hamilton, secretary; A. S. Nicholson, Burlington; Joseph Bowman, Dundas; K. Hall, Kitchener; Dr. Davis, St. Catharines; Mr. Reid, Niagara Falls.

A discussion then took place as to the most convenient date for holding the general organization meeting. It was felt that it should not take place until after the Dominion elections and that it should not be postponed until after the new year. For this reason the available time was narrowed down until the week beginning December 17, and it was concluded that probably the most convenient date would be Friday, December 21.

The organization of the Western Ontario district completes the five local organizations for Ontario. The other meetings have already been reported in the Canada Lumberman, and the representatives appointed, who will attend the general organization meetings are as follows: Eastern Ontario: G. P. Davidson, Estate James Davidson, Ottawa; George M. Mason, George M. Mason, Ltd., Ottawa; C. H. Walters, McAuliffe-Davis Company, Ltd., Ottawa; F. R. Anglin, S. Anglin & Co., Kingston; F. S. MacFarlane, R. MacFarlane & Co., Ltd., Montreal; J. E. Lowey, Brockville Lumber Company, Brockville; D. Carkner, D. Carkner & Co., Kenmore; W. A. Cheney, Vankleek Hill Manufacturing Company, Vankleek Hill; C. R. Robertson, W. C. Edwards & Co., Ltd., Ottawa; E. M. Barrett, Barrett Brothers, Ottawa.

Central Ontario: William Barrett, Canada Lumber Company, Weston; A. C. Reesor, Locust Hill; J. B. Reid, Toronto; T. H. Hancock, Toronto; W. J. Hetherington, Toronto; William H. Thomson, Port Credit.

Northern Ontario: Howard Hesson, Sault Ste. Marie, president; J. A. Laberge, Sudbury, secretary; Henry Knight, Burk's Falls; A. J. Young, North Bay, and Mr. McKinnon, New Liskeard, vice-presidents.

Southwestern Ontario: B. F. Clarke, Glencoe; James Scofield, Windsor; Charles Hubbell, Thamesville; George H. Belton, London; W. A. Hadley, Chatham; E. C. Russell, Windsor, and J. McGibbon, Sarnia.

The United States Steamship Company, New York, N.Y., has been awarded a contract by the United States Shipping Board for the construction of steel and wooden vessels to the value of $18,000,000. The company already had contracts to the extent of $18,000,000, and expect to close further contracts for a similar amount, which will make its total in the neighborhood of $54,000,000.

John P. Conlon, Thorold, Ont., well known to the lumbermen of Ontario on account of his extensive lumbering interests on the Georgian Bay, died recently at Tuscon, Ariz.

Toronto Lumbermen Extending Help

Committees Appointed to Assist in Halifax Relief and to Furnish Firewood for the Poor of Toronto

A largely-attended meeting of the lumbermen of Toronto was hurriedly called on Monday, December 10, for the purpose of discussing the advisability of co-operating in order to send assistance on behalf of the lumber trade of Toronto to the people of Halifax. The meeting was called as the result of a suggestion received from Mayor Church by ex-Mayor Oliver, of the Oliver Lumber Comapany, and was held in the Board of Trade Council Chamber. Mr. Joseph Oliver occupied the chair, and explained why the meeting had been called.

There was a lengthy discussion of the whole situation, and Mr. Oliver explained that a meeting of the City Council would be held at 4 o'clock in the afternoon to discuss what the city of Toronto should do in connection with sending aid to Halifax. He suggested—and it was the opinion of the others members of the trade present—that a committee should be appointed to attend the meeting of the City Council, offering the co-operation of the lumbermen of Toronto in any way that was deemed advisable. It developed in the course of the discussion that, so far as lumber was concerned, the most advisable plan would be to purchase stocks in New Brunswick or elsewhere in the East which were close to Halifax and could be sent in with as little delay as possible. There was so much doubt as to what stocks were wanted and what was available in the East that nothing definite could be done, short of appointing a committee and undertaking to back up substantially any decision that was reached. On motion of Mr. J. L. Campbell, seconded by Mr. John Firstbrook, the following committee was appointed: Joseph Oliver, Hugh Munro, W. J. Smith, T. H. Hancock, and C. W. Wilkinson, who were advised by the motion that the Lumbermen's Section of the Toronto Board of Trade was heartily in accord with the proposal to do anything that was possible to relieve the suffering at Halifax, and would stand behind whatever action the committee might take. This committee subsequently attended the meeting of the City Council, and the members of it were appointed upon the general civic committee to deal with the whole question.

Before the meeting adjourned Mr. W. J. Smith drew attention to the fact that there was a great deal of suffering in Toronto on account of the shortage of fuel among the poorer classes, and he suggested that the lumbermen of the city should make arrangements to have a number of carloads of slabs brought into the city and distributed to the poor, at the expense of the lumbermen. This matter was discussed in detail, and a committee was appointed, consisting of W. J. Smith (chairman), W. C. Laidlaw, W. A. Firstbrook, and C. W. Wilkinson, to enquire into the situation and to dispose of the slabs in such a way as might be found to be most advisable.

On the suggestion of Mr. Walter C. Laidlaw, a canvass of those present was taken to obtain a rough idea of the quantity of slabs they would undertake to furnish. This canvass resulted in members present pledging themselves to the extent of about twenty carloads. There were about twenty-five lumbermen present, and it is believd that among the others who were unable to attend the meeting on account of the short notice obtained several more carloads will be promised. This committee reported also to the City Council, who expressed their appreciation of the offer and stated that they could distribute four carloads of slabs in Toronto immediately. The committee undertook to furnish these and a further quantity when the city should ask for it.

Shipbuilding Employees Drank Poisoned Tea

Eleven employees of the Toronto Shipbuilding Company, whose plant is located at the foot of Cherry Street, Toronto, were poisoned on December 10, as a result of drinking tea for their luncheon from a strange packet which had been left near their tea kettle. It is thought that the poisoning is the result of a direct attempt on the part of enemies of the country to cripple the operations of the Toronto Shipbuilding Company's plant so as to delay it in turning out vessels for the Imperial Munitions Board. Fortunately, the men were hastily taken to the Emergency Hospital, near by, and given medical treatment without delay. Had this not been done it is expected that several of them would have died. As it was, all the men were very seriously ill, but have pulled through.

Hardwood Manufacturers Annual

The Board of Governors of the Hardwood Manufacturers' Association of the United States has called its sixteenth annual meeting, to be held at the Hotel Sinton, Cincinnati, Ohio, Tuesday and Wednesday, February 5 and 6, 1918. It is the purpose of the association to make this meeting one of much practical value to the producers and consumers of lumber. A program is being prepared with careful consideration of to-day's problems and conditions. The program will contain the names of several men of national reputation, experts in their respective lines.

New Minimum Weights for Lumber Cars

Railway Commissioners Issue Order Complying with Request of Lumbermen to Lower Increased Weight Tariffs of the Railroads

In connection with the complaint of the Canadian Lumbermen's Association, the Lumbermen's Section of the Toronto Board of Trade, and others, against the increased carload minimum weights for lumber, both domestic and export, published to take effect on varying dates since April 22, 1917, the Board of Railway Commissioners for Canada have issued a finding, in part, as follows:

At a hearing in Ottawa on July 17, 1917, there was heard the complaint against the proposed increase on the minimum weights of rough forest products. Tariffs providing for such increases were filed by the G.T.R., C.P.R., C.N.R., T.H. and B., and the Temiscouata Railway Companies. The increases were also provided for by the Intercolonial. Exception was taken by shippers and their representatives to the increases, in so far as lumber loaded in box cars is concerned.

The following table summarizes the proposed increases:

	New.	Old.
Cars under 35 feet long	40,000 pounds	30,000 pounds.
Exception—If car fully loaded, will not contain 40,000 pounds..	35,000 pounds	No exception.
Cars 35 feet to 36 feet 6 inches ...	45,000 pounds	34,000 pounds.
Exception—If car fully loaded, will not contan 45,000 pounds..	40000 pounds	No exception.
Cars over 36 feet 6 inches	5 per cent. per foot added to 36 feet 6 inches minimum.	

Cars 35 feet and under constitute only a small percentage of those in service. Cars over 36 feet 6 inches in length are given the same treatment as hitherto. This phase of the matter is not in issue.

The tariffs contain a provision allowing a reduction of 5,000 pounds when a car loaded to full practicable capacity will not contain the higher minimum.

The difficulties in the way of obtaining a uniform loading are recognized. The weight that can be loaded into a particular car varies with the density, seasoning, and dimensions. A check made showed that "shorts" 6 to 11 feet in length, loaded into a 36-foot car had a loading of 45,600 feet. On the other hand, with lumber 12 to 16 feet in length it is impossible to load three lengths of lumber end to end in a car 36 feet long.

The evidence as set out shows that in general lumber loads heavier than the old minimum and frequently heavier than the new. There are also many instances where the load is lower than the tariff weights.

Exhibit No. 14 gives the total shipment of export lumber shipped to Montreal for the years 1912 to 1916, inclusive. Export lumber may be taken as characterized by efficient loading. This shows the following results:

Cars.	Average feet b.m. per car.	Average weight per car in pounds.
2,105 white pine	16,559	39,419
1,574 red pine	15,589	42,826

The combined averages are 16,144 feet b.m., and 40,904 pounds per car.

Mr. Bremner, for Watson & Todd, Ltd., filed a statement showing the railway weights of 384 carloads of white and red pine and spruce to Montreal for the export season of 1916, with the following results:

	Cars	or	Per cent.
Weighing 34,000 pounds or less	23		6
Weighing over 34,000 pounds to 40,000 pounds	91		24
Weighing over 40,000 pounds to 45,000 pounds	119		31
Weighing over 45,000 pounds	151		39
	384		100

The average load was 43,567 pounds, although 39 of the cars measured over 36.6 in length. So far as the averages go, this result would justify the carriers' "exceptional" 40,000 pounds minimum as the standard, instead of their standard of 45,000 pounds. However, the application of the 40,000 pounds weight as the standard would penalize some 87 cars of over 35 feet in length, or about 24 per cent. of the total of such dimensions, which averaged less than 40,000 pounds, but in excess of 35,000 pounds. A minimum predicated on the arithmetical average would be fair, no doubt, if the railways did not weigh the cars; but as they do, although the minimum ought to conform in a measure to the average under the circumstances, it ought also to lean towards the lighter loading.

The railways advocate the proposed increases with a view to obtaining heavier and more efficient loading. With the existing situation in regard to rolling stock, it is in the shippers' interest to have as efficient loading as possible. This was not contested by shippers at the hearing. What is involved is what, considering all the circumstances, is reasonably heavy loading.

As arranged at the hearing, the board's officials have made checks of actual loadings, and it appears that it will be reasonable to arrange as follows:

	Pounds.
For closed cars under 35 ft. in length, inside measurement ..	35,000
Except that when cars loaded to full capacity will not contain 35,000 pounds the minimum will be the actual weight, but not less than	30,000
For closed cars 35 ft. and not over 36 ft. 6 in. inside measurement	40,000
Except that when cars loaded to full capacity will not contain 40000 pounds the minimum will be the actual weight, but not less than	35,000

Note.—The term "full capacity" permits a space of 12 inches between the top of the load and the car lines or rafters of the car.

Order may issue accordingly.

Duke of Devonshire Visits British Columbia Mill

His Excellency the Duke of Devonshire, together with his party and a number of leading officials and citizens of Vancouver, B.C., recently inspected the Hastings mill of the British Columbia Mills, Timber, and Trading Company. The party was conducted through the mills by Mr. Eric W. Hamber, general manager, and Mr. Arthur J. Hendry, general superintendent. A complete tour of the plant was made, and the party saw in detail the manufacture from the log to the finished product, including a large quantity of specially selected timbers for airplane construction. Timbers were also shown which were being manufactured for trench work and railway work behind the lines in France. In another section of the mill the party saw a large quantity of material to be used in the construction of vessels for the Admiralty. Another feature of the stock shown was a large quantity of material for Australia, Japan, South Africa, etc. At the wharf a vessel was shown moored, with over a million feet of lumber on board ready for shipment across the ocean. His Excellency expressed great interest in the industry, and said: "I had no idea that the lumber industry was such a gigantic one." As His Excellency left the mills the 1,200 employees lined the roadway and cheered him enthusiastically.

Many Working Class Houses Needed in England

The United States consul at London, England, in a report upon the housing problem in Great Britain, says:

"One of the most important questions in Great Britain for several years past—and one which has assumed political prominence at many electoral campaigns—is that of the housing of the working classes. This subject is now being taken in hand by a departmental committee appointed by the government. It is admitted by the board that 500,000 houses are now urgently wanted, but other authorities estimate that not less than 1,000,000 houses are necessary, costing $1,216,625,000.

"On the question of finance, government aid has been promised. In the meantime a grant of $97,330,000 has been asked for by some housing organizations. The government in November, 1914, decided in favor of a free grant from the exchequer, as well as loans, to permit of local councils charging customary interest without incurring loss; and, while that policy is still in force, it has, so far, only affected certain munition areas.

"It is recognized that overcrowding has been one of the causes of industrial unrest, especially in districts where war work is particularly heavy; and that bad housing has led to high infantile mortality, notably in the northern industrial centres. In three Scottish districts there is immediate urgent need for accommodation for 100,000 workers.

"Since 1905 there has been a decrease in the building of houses for the working classes. With the outbreak of war practically a complete cessation of small house building set in, except in munition areas.

"It is reported as certain that at an early date government approval will have been granted to plans involving the erection of not less than half a million houses within the first two years after the conclusion of the war, and that, in order to prevent rents being higher than in pre-war times, financial assistance will be substantially provided."

Portable House Rumors Criticized

United States Firms Report That Little or No Trade Has Developed—Possibilities all in the Future

There has been quite a revival recently of the discussion about the trade in portable houses required by France. Such information as was available upon this subject has been published from time to time in the Canada Lumberman, and recently the matter was dealt with editorially in these columns, at some length. Reference was made, in some of the correspondence received by us on this subject, to orders which were said to have been obtained by United States firms, and the inference was that Canadian firms had been neglecting their opportunities. In order to enquire into the facts in this connection the Canada Lumberman sent a circular letter to a number of large firms in the United States which are in a position to cater to this trade, asking them for such information upon the subject as they felt inclined to make public. Three replies were received. One is from the Gordon-Van Tine Company, of Davenport, Iowa; another is from the Illinois Lumber Yards, of Cairo, Ill., and the third from the Aladdin Company, Bay City, Michigan. All three replies suggest that there has been much more smoke than fire in connection with this situation, and readers of the Canada Lumberman who have been inclined to criticize Canadian firms on the score of their negligence will be interested in reading these letters. While we do not present the letters as being a final utterance upon this situation, we feel that they do, to quite an important extent, verify the statement made by some Canadian firms who have advised us that the possibilities in connection with this trade all lie considerably in the future, and that about all they can do to-day is to prepare to go after this trade when the opportunity develops. The three letters referred to above are as follows:

Reports Not Based on Facts

Editor Canada Lumberman:— Cairo, Ill.

We are just in receipt of your communication requesting information relative to the various reports appearing in the press, since the beginning of the war, about alleged portable house orders received from the allied governments.

We wish to advise that we have seen in the last three years a great many articles written on this subject, and reports of alleged portable house orders, and we have had occasion to investigate the origin of same, and found that such reports were not based on facts, but merely inquiries received from the agents of the allied governments.

At the beginning of the war, when the United States was out of it, there was the promise of a great market for portable houses for France and Italy, to replace temporarily the villages destroyed during the early part of the war. The agents of allied governments went so far as to place orders in the United States for samples of both metal and wooden houses. These buildings were shipped about the time of the sinking of the Lusitania, and, as you are aware, a short time after this disaster, shipping was demoralized and ocean rates were more than trebled, which prohibited the placing of orders for portable houses. Consequently, all negotiations were dropped, and as the matter now stands, we do not anticipate that any orders will be placed for portable buildings until after the war, when there is some reduction in ocean rates. Also we do not feel there will be any great volume of this business after the war.—Illinois Lumber Yards, E. A. Kennedy, Manager.

Reports of Orders Proved Erroneous

Editor Canada Lumberman:— Bay City, Mich.

I know of no orders placed by the allied governments for portable houses in quantity since the beginning of the war. There have been many reports of large quantities running as high as 50,000 houses being shipped abroad, but in every case, when investigated, they turned out to be erroneous.

This company did ship 300 6-room houses to England this spring, and the United States Government is now manufacturing some portable barracks buildings for shipment to France.

This, I am sure, covers all the facts relating to your inquiry.—Yours truly, O. E. Sovereign, General Manager, The Aladdin Company.

Only a Few Special Orders Filled

Editor Canada Lumberman:— Davenport, Iowa.

In the summer and fall of 1915, there was a great furore in certain business channels regarding portable houses to be used in the rebuilding of France and Belgium. At that time it was thought that the buildings would be needed very quickly and a number of commission men in New York, London, and Paris, who thought they had the inside track, talked about immediate orders, and induced various factories to submit sample portable houses, which were shipped to France.

To the best of our knowledge not one of these concerns ever received an order for portable houses, nor have portable houses been shipped to Europe in any quantities. A few special orders have been filled; one for instance, being some houses for factory workmen in England.

Of course, we know now that the rebuilding of France and Belgium is a question to be settled and carried through when the war is ended. Until that time, it is our opinion that most of the talk about portable houses for the allied governments is purely preliminary.—Gordon-Van Tine Company.

Conservation Commission Meeting

The annual convention of the Commission of Conservation was held recently at Ottawa, and was largely attended. One of the chief addresses presented was that of the chairman, Sir Clifford Sifton, who referred to a number of matters which are of interest to the lumber industry. He dwelt with emphasis upon the importance of eliminating political patronage in connection with the outside service of the Forest Branch of the Department of Lands. The new Union Government, he said, had definitely fledged itself to abolish political patronage in connection with all appointments to the outside Civil Service. There was no branch of the public service that would profit more by the adoption of this principle than that of the Forest Service.

The report of the Committee on Forests reviewed conditions in connection with the administration of forests in the various provinces of Canada, stating that notable progress had been made during the past year in the direction of better conservation of our forest resources. The developments in connection with protection against forest fires were particularly gratifying. In regard to the threatened danger to white pine timber in the Province of Ontario, on account of the white pine blister rust disease, the report said that this disease had become firmly established in Southern Ontario and was threatening the white pine, especially the young growth, in the Trent watershed and the Georgian Bay District. It had also been found in several counties in Quebec. In order to control or retard the spread of this disease the most vigorous action was imperative by the Dominion Government and the provincial governments.

The report noted with satisfaction that the Provincial Government of New Brunswick is now considering the consolidation, under the Forestry Division, of the various lines of forestry and fire protection work, including the supervision of scaling and logging. Favorable action in this direction was urgently recommended.

It was recommended also that provision should be made for the extension to all forest areas in New Brunswick of the permit system of regulating settlers' clearing fires.

The Province of Quebec was congratulated upon the extension of the co-operative idea of forest fire protection to include 80 per cent. of licensed crown timber lands of the province, as well as a considerable area of unlicensed crown timber lands. The four forest protective associations now existing in the province are protecting an area of about 70,000 square miles.

The report stated that a new era in forest fire protection had begun in Ontario, and a creditable start had been made in the work of providing modern fire protection facilities for the timber of the province.

Reference was made to the study of conditions on cut-over pulpwood lands, begun last summer in the Province of Quebec, under the direction of Dr. Howe, which had shown that the popular belief that spruce and balsam timber in Eastern Canada could be cut every twenty years or so was quite erroneous, and that it would take anywhere from thirty years upward to produce a new growth of merchantable size.

Judgment Given for Damages Caused by Logs

An important lawsuit was heard recently in the Supreme Court of New Brunswick involving a case of alleged trespass and damage by the Nashwaak Pulp and Paper Company, Ltd., upon the property of S & R. Wade. The action was for damages amounting to $3,360, and was the second claim entered against this company for damages alleged to have resulted from the recent annual freshet on the Nashwaak River. The other case was that of Dinsmore against the Partington Pulp and Paper Company, which has been settled. A great deal of expert legal talent was employed in the case and widespread interest was being taken in it. The plaintiffs alleged that the company's logs blocked in the Nashwaak River and forced a jam to a depth of thirty feet, and that it took three weeks for the water to subside. They stated that the overflow caused damage to their farm to the extent above mentioned. The company entered a counter-claim of $1,000 for additional cost of removing logs and detention of logs by the plaintiffs. They pleaded that there was no negligence on their part, and that all the damage was the result of an unusual high freshet. The jury in this case was out for about five hours, and returned a verdict in favor of the plaintiffs. Judgment was given for them to the amount of $684 and costs.

Spruce Log Price Fixed

The United States Government has fixed the price of spruce logs at $35 for No. 1, $20 for No. 2, and $11 for No. 3.

Mr. W. B. Snowball, of the J. B. Snowball Company, Ltd., Chatham, N.B., attended the recent meeting of the Canadian Forestry Association at Ottawa, Ont., and visited Toronto during the last week in November.

Frame Construction Replaces Concrete

Large Food Products Plant at Chatham, Ont., Designed for Concrete but Changed to Frame

That the shortage of materials and the scarcity of labor are giving wood a good opportunity to regain some of the business it lost to competitive building materials previous to the war is indicated by the fact that frame construction is relatively more extensive to-day than it was, Not only is this type of construction getting a greater share of business, but one hears, upon occasion, of buildings being planned of reinforced concrete, but being changed to the frame construction type, because of its lower cost and satisfactory results. An instance of this is the large food products plant erected this year at Chatham, Ont., for the Libby, McNeill & Libby Company, of Chicago.

The original plan called for reinforced concrete construction, with a large additional building in front, but the plans were changed and the plant was built of frame construction type.

The plant as built at present comprises a group of five buildings—boiler-room and tomato products building on one side and canning building, tank and process building and cabbage bin on the other side, a space of 74 feet being left between the two rows of buildings for unloading platform and two tracks.

The tomato and canning buildings are both 80 ft. x 160 ft., one storey high, of frame construction, the tomato building having a mezzanine deck 32 ft. x 80 ft. and two large covered receiving platforms. The basement floors are of concrete, and the main floors of 2 in. flooring, laid on a sub-floor with three-ply slushing between, the finished floor being caulked with asphalt. Both buildings are provided with electric elevators.

The tank and process building is 80 ft. x 240 ft., one storey, of frame construction, with a second storey part 32 ft. x 64 ft. The foundation is composed of concrete piers, with brick panels between. The tank department is 80 ft. x 180 ft., and is devoted to storage tanks and vats. The process part is equipped with a waterproof floor, the basement underneath being used for storage purposes.

The cabbage bin is 40 ft. x 70 ft., one storey and full monitor, with driveway through the centre and hopper bins on each side. The basement walls are of concrete, hopper floor of concrete, and the superstructure of frame.

Mill Work an Important Item

The buildings being mostly of frame construction, the lumber and mill work became a very important factor of the material department, the total requirements in this line amounting to nearly 1,000,000 feet of timber and dimension and 120,000 feet of mill work. frames, etc. The timber and dimension specifications called for long leaf yellow pine and British Columbia fir, all surfaced on both sides. It was found impossible to get other than mill delivery on surfaced stock of the required sizes and no definite time of shipment. To meet this difficulty transit cars of rough stock were picked up by the lumber department and diverted to Chatham. In the meantime a stock yard was established near the industrial spur, and in the short time of three weeks all the timber and dimension had been delivered and properly piled, ready for milling.

A small mill shed was erected in connection with the stock yard and a 16 in. x 24 in. four-side surfacer and matcher installed. All the surfacing and matching was done on this machine, the material being handled to the machine by a system of rolls and tramway. A large band resaw was also brought into use for resawing all larger sized timbers to the proper dimensions, the cuts or offals being worked into dimension stock.

The stock yard and mill were placed in charge of a competent mill man, who got out the material on orders from the carpenter foreman and delivered it as directed by him.

A reserve stock pile for small dimensions and finishing material was established near the main buildings. A portable woodworker was housed nearby, and a large amount of light framing and cutting was done on this machine. It was originally decided to move the woodworker from place to place as needed, but it proved more advantageous to keep it near the stock pile. In this manner all cuttings were in one place, and no time was lost by the woodworker, the cuttings being worked into bridging and lookouts when the machine was free from framing. The small items were stored in part of the woodworker shed, and were always ready for use when needed.

Lack of Experienced Carpenters Handicapped Work

The contractors were greatly handicapped by lack of experienced carpenters and helpers, and the organization plan for this end of the work could not be carried out in the manner desired. However, the following system was adopted, and, after a short time, proved satisfactory.

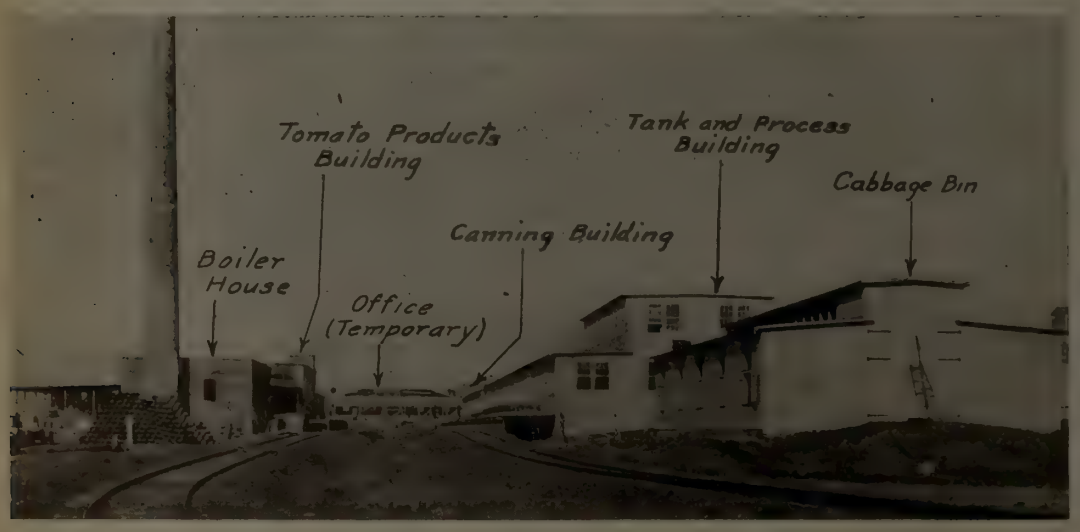
The work was in charge of a general carpenter foreman, assistant foreman, and two gang foremen. The carpenter and helpers were divided into three gangs, namely, framing, erecting, and sheathing gangs, care being taken to have a few experienced men in each group. After the buildings were enclosed the men were again divided, the more capable being worked on the interior finish, siding, etc., while the balance were placed on platform work. In this manner the work was carried forward promptly., and all carpenter work completed within seventy-five days.

The Meaning of Cost

By W. S. Webb

The retail lumber trade is an intricate business, combining large investment, hard work, and considerable risk with small profits, or, as happens, no profits at all. We know of hundreds of retail lumber yards scattered about the country, and, with few exceptions, their profits are small—out of all proportion to the amount of capital involved and the hard work required to keep them going. Why is it?

It is said that competition prevents us from getting prices that show a reasonable pront, and undoubtedly that is true. Intelligent competition—the right kind of competition, however, does not prevent our success. It is the bad competitor—the fellow who fails to make any success himself and by his methods and prices prevents his neighbors from making a success of their business—who is the menace to the trade. The bad competitor is usually one who does not know what it costs him to do business. We all have some idea of the cost of doing



General view of Libby, McNeill & Libby Company's plant. Buildings arranged in two rows with tracks between.

Buildings are of frame construction.

business, but very few of us realize just how much it actually does cost. It can be easily understood that we must take into consideration every item of expense in conducting our business and add it to the cost of our lumber before we can make any profit. Some of the items that enter into our costs of doing business are rent, interest, insurance, depreciation of plant and stock, stable and garage expenses, bad debts, salaries and office expenses, and labor. Now any of us who do not see to it that each thousand feet of lumber he sells carries its proportionate share of all these items of expense before adding his profit is fooling himself.

There are many different methods of apportioning these expenses —some apportion expenses at so much per M. feet on the quantity of lumber handled; others on a basis of percentage of sales. I have priced lumber by using a combination of both the methods mentioned. About a year ago an effort was made by a group of Brooklyn retail dealers to ascertain the cost per thousand feet of lumber of doing business in the Metropolitan district. As I recollect it, practically all the yards responded, and the average cost per M. feet of lumber was found to be $8.

This averages up pretty well with my own method of figuring, which at that time showed costs of about $5 per M. on lumber costing $20 per M. up to $23 per M. on lumber costing $100 per M. Undoubtedly to-day the cost of doing business would be at least $1 per M. more.

On a percentage basis the average cost of doing business in the Metropolitan district would seem to be about 20 per cent. on the selling price—mind, I say on the selling price, not on the cost price. There is a big difference. Twenty per cent. on the selling price would represent 25 per cent. on the cost price, and I have met men in the retail trade who were satisfied to add 25 per cent. or less to their cost price and felt they were making a profit.

Twenty-five per cent. added to the cost price equals only 20 per cent. on selling price, and this 25 per cent. added to its cost the average yard must have to break even.

Thirty-three and one-third per cent. on cost equals 25 per cent. on selling price; 43 per cent. on cost equals 30 per cent. on selling price; 50 per cent. on cost equals 33 1/3 per cent. on selling price; 100 per cent. on cost equals 50 per cent. on selling price.

Consequently, on a basis of 20 per cent. overhead to make 10 per cent. net profit it is necessary to add 43 per cent. to our cost.

It seems to me that it would be a great benefit to the retail trade if some uniform system of figuring costs could be adopted. Nothing I can think of at the present time would have the same effect in putting competition on a more satisfactory basis. A system for this purpose should not be complicated, and I am inclined offhand to favor the percentage system as being the simplest system and one that would answer as well as any other perhaps if adopted generally by the retail trade. Just take the cost of your lumber and add 50 per cent. Of course, we haven't any of us been getting that—at least, not as a steady diet—but, to my mind, we should get it.

Why is it that men in other lines of trade seem to make so much more of a success of their business than does the average retail lumber dealer? There is hardly any line of business I can think of that requires so much capital and hard work as retail lumber, and still our profits—when we have any—are smaller than in almost any other line of business.

Fifty per cent. added to our cost seems like a lot of money, but let us see just what is represents in the way of profits. Fifty per cent. on cost equals 33 1/3 per cent. on selling price. Our overhead is 20 per cent. on selling price; profits about 13 per cent. Now, 13 per cent. is not too large a profit to be made in the retail lumber business. At any rate, we ought not to figure to make less than 10 per cent., and that means, according to the percentage system, 40 per cent. added to the cost of our lumber. Some higher than we have been accustomed to figuring, isn't it?—but think it over.

Libby, McNeill & Libby Company's plant.—Interior view showing frame construction and wood floor.

The Return of the Wooden Ship

A contributor to the Standard Oil Bulletin (San Francisco) says:

"The wooden ship has come back. As an auxiliary, powered with internal combustion oil-burning or Diesel engines, she is fast gaining recognition as a reliable and economical freight-carrier, and a worthy competitor of the steel steam-powered vessel which had all but forced her off the seas.

"The shortage of steel and demand for bottoms created directly or indirectly by the war, coupled with a fuller realization of the practicability of the Diesel and semi-Diesel engines in the larger-sized freight-carrying vessels, have led to marked activity in the building of these wooden auxiliary ships, or motor-ships, as they are known. Those who have bemoaned the passing of the wooden ship will find in this new type of vessel a worthy successor to the wooden ships of other days, for, though she has not perhaps the grace and beauty of the 'clipper' ship, she does have the charm that must always lie in the vessel made of wood, with the added advantage of independence of the winds. She has about her the same smell of the forest, the same elusive spirit that seems to make her a living thing, as though into her hull had entered the life of the tree; and in the shipyards where she is building to-day are to be found (if one will close his ears to the insistent clangor of the pneumatic hammer and his eyes to the swiftly-moving steam hoist and great crane) the same sights and sounds that were known to our fathers' fathers a half-century and more ago in New England. The demand for the motor-ship has quickened this old industry of wood shipbuilding into new life, in which rejuvenation no country is more active than our own and no section more productive than that bordering on the Columbia River in Oregon. And nowhere so well as in Portland and vicinity should this new-old industry flourish, for in Western Oregon and Washington, and within a comparatively few miles of the city, are standing over four hundred billion feet of Douglas fir, much of it from three to five feet in diameter and 175 to 250 feet in height, yielding an almost inexhaustible supply of a wood ideal for shipbuilding, because of its light weight, strength, durability, non-shrinking property, and easy workability. Coming in such lengths, splicing is reduced to the minimum.

"As though it were not enough for one tree to furnish immense timbers for frames and beautiful, strong masts and spars, the stumps of the Douglas fir make the best ships' knees to be had—no small item when it is remembered that several hundred knees are used in one ship for deck-beam supports.

"With this abundance of raw material at hand it is to be expected that the Columbia River cities, with their other fine natural facilities for wood shipbuilding, should enter largely into the construction of motor-ships and display the remarkable activity which is now to be seen in shipyards, old and new, from Portland to Astoria. The yards are working to capacity, new ways are being put in as fast as possible, and new companies are preparing the ground for ways. There are also, of course, several companies engaged in the building of steel vessels (which industry shows activity equal to that of wood shipbuilding) that are not mentioned herein.

More Shell Orders for Canada

Recent news despatches state that the British Government has instructed the Imperial Munitions Board, Ottawa, to issue without delay to Canadian metal-working plants equipped for the work contracts in volume covering the steel, forging, and machining of 18-pdr. shrapnel, 4.5-inch and 6-inch high explosive shells which will ensure steady employment both of men and machines for a period extending well into the new year. The success of the Victory Loan has apparently been anticipated in these orders. The decision to place further large British shell orders in Canada, coming as it does in the wake of the distribution of several million dollars' worth of 75 and 155-millimetre shells by the American Government, the placing of a huge contract for fabricated steel for United States ship construction, and the receipt of a contract by a Toronto firm to supply airplane engines to the value of some $5,000,000 to the Imperial Government will be important factors in maintaining industrial activity this winter.

John Ross, general superintendent of the Abitibi Power and Paper Company's plant, Iroquois Falls, Ont., was instantly killed by coming in contact with the company's power transmission line on December 8.

Splicing and Lacing Belts

Contributed by Dunlop Tire and Rubber Goods Company, Limited

Transmission belts can be made endless at the factory, providing the proper details, in regard to their exact length, have been furnished. This practice is recommended on the basis of the superior facilities in the factory for handling this work efficiently. Sometimes, however, it is either necessary or desirous to do this on the pulleys. There are many ways of splicing rubber belts, but the following method would seem to be the most satisfactory for users to adopt:

To ensure a good joint use about three feet of belting for the splice. Cut the belt ⅛ to ¼ of an inch shorter—according to its size—for every foot in length than the actual distance between and around the pulleys.

Step off the ends, as illustrated, allowing the following suggested length of lap per ply, according to the size of belt:

Belt width.	Length of lap.	Belt width.	Length of lap.
Up to 4 in.	3 in.	14 to 20 in.	9 in.
5 to 12 in.	6 in.	20 in. and over	12 in.

Use a heavy, sharp knife to ensure all ends being perfectly cut—not jagged. Better true up the steps with a set square.

Avoid irregularities in the steps that prevent one from fitting snugly into the other. No one step should reach over the other more than one-sixteenth of an inch, nor should any space be left between them. Remove the sharp edges by trimming the ends of each on a bevel. Distribute evenly three coats of cement, allowing each coat to dry before the application of the next is made.

When the last coat becomes "tacky," and after all gasoline has evaporated, finish the operation by joining the plies together, being sure to butt the ends accurately; then thoroughly roll down with a metal roller.

Machine for Splicing

To secure the best results, and to eliminate all possible stretch, it is expedient that the belt be reasonably tightened by draw-clamps before fastening the splice. The small and inexpensive machine, illustrated herewith, is a very efficient apparatus for this kind of work. This press is recommended for making the endless joint. The whole job can be completed with it, either in the shop or at the drive over the pulleys. To prevent the belt adhering to the press, place pieces of tin on both sides and moisten with soapy water.

Always be sure that both sides of both ends of the belt are pulled evenly, so as to prevent a crooked joint. Do not remove the press until the belt is well set. To further safeguard your work stitch the joint in rows, one inch apart. Do not cut the thread at the end of each row. As far as possible make it continuous..

A joint, if made as recommended, will be absolutely as strong as any other part of the belt, and it will be difficult for anyone to detect the splice.

Belt Lacing

Although fastening the ends of belts together by the use of a leather lace, as described below, is probably the most popular method employed, the metal fasteners illustrated are found to be very satisfactory on sizes up to 12 inches. Much better results can be obtained through splicing belts over 18 inches wide by the method explained previously.

Either one of the two metal fasteners illustrated below will give very satisfactory service to users who prefer this method of joining belts. Both of these fasteners are strong and durable, and, when properly applied, will hold securely throughout the life of the belt. The manner of attaching is simple, and takes but a very short time.

Before joining, a belt should be one-eighth to one-quarter of an inch shorter—according to size of belt—for every foot in length than the actual distance between and around the pulleys. It is important also that the ends of the belt be cut absolutely square.

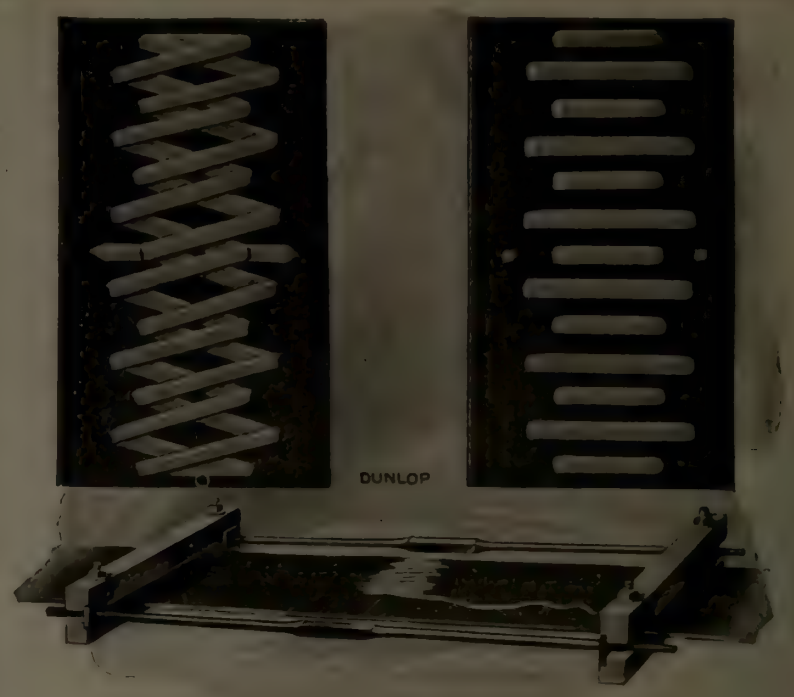
While there are many ways in which lacing can be done, the method illustrated below is most simple and effective.

The following table will give approximtaely the number of holes, which should be cut with either an oval or round punch,, and which it is advisable to make in the different widths of belting:

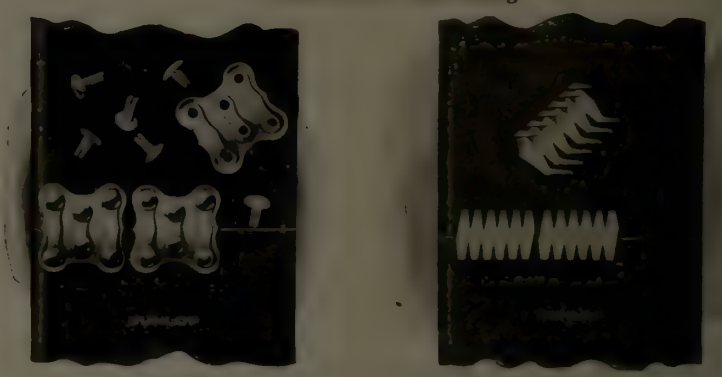
2 to 2½ in. belting	3 holes
3 in. belting	4 holes
4 in. belting	5 holes
5 in. belting	6 holes
6 in. belting	7 holes
8 in. belting	9 holes
10 in. belting	11 holes

The holes should not be closer than one-half an inch from the edge of the belt nor nearer the end than five-eights of an inch, and should only be large enough to take the lace drawn through tightly.

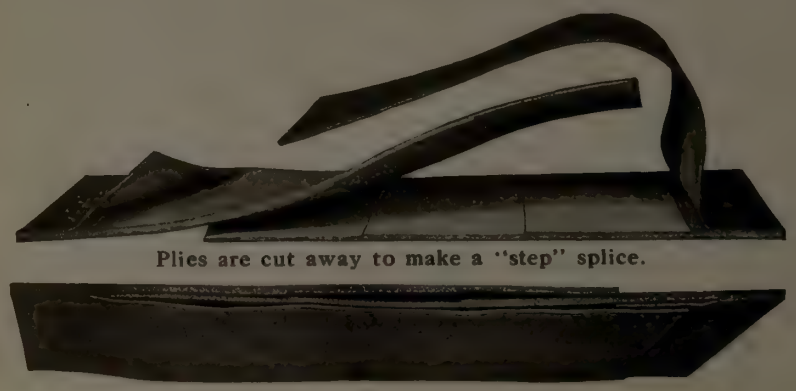
The widths of lace generally used are as follows: Belts up to 5 in. wide, 1/4 in. and 5/16 in.; belts from 6 in. to 12 in. wide, 3/8 in. to 1/2 in. Do not employ too heavy a lace, as it will form an unduly large



A method of belt lacing

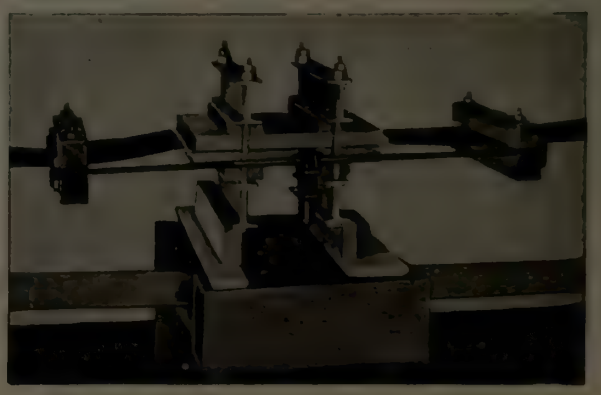


Two styles of metal fasteners.



Plies are cut away to make a "step" splice.

How stepped ends match—Belt runs to right.



Machine for making belt splices.

ridge, which will cause the belt to jump and pound on the pulleys to an injurious extent. In narrow belts, butting the two ends together and lacing is generally sufficient, but fairly wide belts require the addition of a piece of rubber-frictioned duck on the over-side.

The Importance of Including Belt Thickness

I have seen it argued that belts don't slip as much as we think.

A certain millman put a belt on a 4 inch driving pulley and made it drive a 40-inch pulley. The small driving pulley made 1,000 r.p.m. He, therefore, figured that the speed of the large pulley should be 100 r.p.m. because 1/10 × 1,000=100.

The ratio of 4 to 40 is the same as 1 to 10 you see. It seems like a very simple thing to figure, doesn't it?

However, imagine this gentleman's surprise when he found that the driven pulley ran at a speed of a trifle over 105 r.p.m. instead of 100; and, when fully loaded, its speed was 103 r.p.m.

"How does it do it?" he asked. "Instead of slipping or losing speed on account of belt-stretch, it actually gains speed on me!"

So, as a matter of experiment, he reversed the drive, making the large pulley the driver and running it at 100 r.p.m. He figured, as is ordinarily done, that the speed of the small pulley should be 1,000 r.p.m. But, lo and behold! he could only only get 948 r.p.m. out of the small pulley, even when no load was being transmitted. When the belt was stressed by a load the best he could get out of the small pulley was 929 r.p.m.

"This is terrible!" he declared. "What's wrong?"

Thereupon this gentleman "got busy" and started reading what he could find on the subject of belt transmission. He bought a book and studied it carefully, but no good did it do him. He found this parallel problem in Cromwell's "Belts and Pulleys":

"The diameters of two pulleys which are connected by one and the same belt are D=30 inches and d=10 inches. The larger pulley makes N=120 r.p.m. It is required to determine the number of revolutions per minute of the smaller pulley. From the formula we have N/n=d/D or 120/n=10/30. From this, n=30 × 120/10=360."

"By crackie!" ejaculated the gentleman; "that's just the way I worked my problem, but it doesn't come out right in practice."

He looked into manufacturers' catalogues also, but found no help until he took his troubles to a friend who is an old hand at the belt transmission game, and this friend at once told him that the trouble lay in the fact that the thickness of the belt was not taken into consideration. "You must always add the thickness of the belt to the pulley diameter in the formulas," counselled the friend.

Thereupon the gentleman made this formula out of the one that appears in Cromwell's "Belts and Pulleys":

$$\frac{N}{n} = \frac{(d+t)}{(D+t)}$$

Where N=r.p.m. of the large pulley;
n=r.p.m. of the small pulley;
D=diameter of the large pulley in inches;
d=diameter of the small pulley in inches;
t=thickness of the belt in inches.

He substituted his values which I have already given, in this formula, and, sure enough, he got 105 as a result when the small pulley was used as the driver, and 948 when the large pulley, as the driving pulley, ran at 100 r.p.m. The thickness of the belt was ¼ inch.

In order to impress this point more forcibly on the reader's mind I have, therefore, made this sketch in an exaggerated way. It shows just how puuley diameters should be measured, including the thickness of the belt, and the sketch also shows why a thick belt will "fool" the ordinary layman more quickly than will a thin one. If a belt didn't have any thickness at all, then, and only then, the formula as given in Cromwell's book would be correct.

Now, coming back to my first sentence, I have seen it argued that belts don't slip as much as we think on account of this influence of belt thickness. That, however, is not true. Belts DO slip, and it is a pretty safe bet that they always will, to some extent at least.

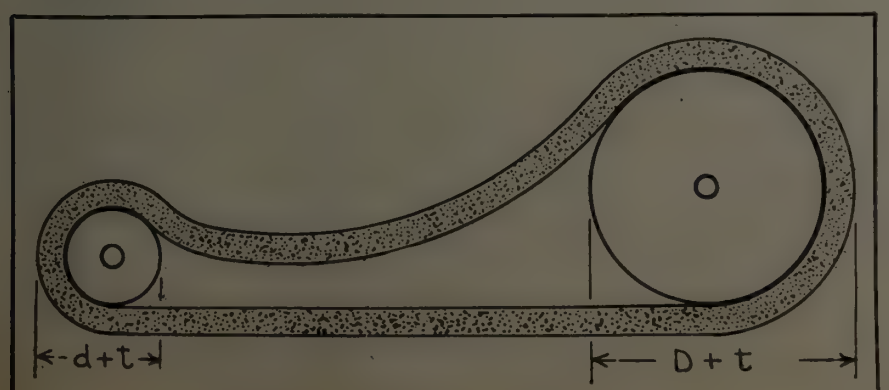


Diagram illustrating effect of belt thickness.

It is a simple matter to compute belt slip, even when taking belt thickness into consideration. This is done by using the above gentleman's correct formula as a basis, and, as a result, we have this formula:

S=R (D+t)—r (d+t)=total belt slip per minute in inches,

Where R=r.p.m. of the driving pulley;
r=r.p.m. of the driven pulley;
D=diameter of driving pulley, inches;
d=diameter of driven pulley, inches;
t=thickness of belt, inches.

Now, if you want to compute the horse-power lost, due to belt slip, use this formula:

$$h.p. = \frac{h.p. \times S}{R\,(D+t)}$$

when h.p. is the horse-power of the engine or motor given to the driving pulley.

If you will apply these correct formulas to your belt drives you will surely find that every belt that pulls any load at all is slipping to some extent. There is a power loss in every working belt, due to either slip or creep. If there is no slip there certainly is creep.

Creep is due entirely to the elasticity in the belt, and is unavoidable, so if you find that you are losing about 2 per cent. of your power through use of the above formulas, and if the belts are heavily stressed, you can safely attribute the loss to creep. But if you get a result greater than 2 per cent. you can generally be sure that something is wrong and power is needlessly going to waste. Slip can be stopped, you see, by giving the belt proper care.

A belt that is transmitting power is tighter on one side than on the other. The tighter side is stretched more than the other. We, therefore, have a longer belt going onto the driving pulley than comes off. The belt naturally has to adjust itself as it goes around the pulley to make up for this difference in length. Hence we have that unavoidable action known as "belt creep." Do you get the idea?

So, in conclusion, we must agree that belts either slip or creep, and every action can be accounted for. But, above all, when making your computations, don't forget to include the thickness of the belt.

N. G. Near.

Walter H. Shaw Honored by Associates

On December 7 the staff of the R. Laidlaw Lumber Company, Toronto, held their usual monthly dinner and meeting at the Merchants' Hotel. At the conclusion of the dinner, Mr. C. G. MacBeth, general manager of the retail department, made a brief speech on behalf of the firm and staff, in which he called attention to the fact that Mr. Walter H. Shaw was severing his connection with the firm at the end of the year. Mr. MacBeth spoke of the indefatigable attention which Mr. Shaw had given to the affairs of the firm and the great assistance which he had been to him during his time of service. Mr. Shaw has been with the company continuously for twenty-two years, and is retiring in order to take a holiday in the South and finally intends to settle down in Canada and go into business on his own account. Mr. MacBeth presented Mr. Shaw, on behalf of the firm and staff, with a travelling wardrobe trunk for himself and a club bag for Mrs. Shaw. Mr. Shaw made a brief and suitable response.

Licenses for Canadian Goods in Bond Through U. S. A.

The United States War Trade Board has passed a resolution authorizing the director of the Bureau of Exports to license freely cargoes originating in the United Kingdom, France, Italy, or their colonies, etc., when shipped via United States ports to United Kingdom, France, and Italy or their colonies, etc. Instructions are being issued by the Bureau of Exports to make this resolution effective. All shipments of the above nature "in transit" originating in Canada and passing through the United States by rail, in bond, will be forwarded by the collectors upon receipt from the shipper of an additional copy of the United States customs carriers' manifest form 7512. Similar arrangements are to be made in connection with cargoes shipped from Canada by a steamer which touches at a United States port. In such cases collectors are authorized to license the cargo upon receipt of a copy of the manifest covering it.

The United States Government, acting through the Department of Justice, has reached a compromise with the news print manufacturers, in accordance with which the maximum price of news print paper at the mills, bought in rolls in carload lots, is to be $3 a hundred pounds until the end of March, 1918, after which the maximum price will be determined by the Federal Trade Commission and subject to review by the three judges of the United States Circuit Court of District of New York. The latter maximum price is to prevail during the period of the war and for three months thereafter, unless altered by the commission and the court. Under the same agreement the News Print Manufacturers' Association is to be dissolved.

Securing the Interest of Architects

Working Up a Reputation for Doing Particularly Fine Work—The Architect's Influence Well Worthy of Cultivation

One of the subjects discussed occasionally by retailers and planing mill firms is the importance of getting into touch with architects and seeking to obtain their interest as well as to co-operate with them. It is pretty generally admitted that there is an important field here for improving business and that it is much neglected. G. D. Crain, Jr., in an article in the Woodworker, discussing this subject, deals with it as follows:

Every planing mill man has to do business with architects, and presumably knows the best method of handling this important factor; yet almost any manufacturer in this line will admit that he has had trouble solving the problem and getting into the right position with the men who decide what kind of trim to use in their buildings and what manufacturers to give the jobs to. A suggestion that perhaps planing mill operators are not going after this business in the best possible way was given recently in a letter received by an association of lumber manufacturers from an architect in an Eastern city.

"Will you please give me the names of some reliable planing mills," the letter ran, "that can furnish stairway materials, including treads, rails, balustrade, newels, etc., for a large residence job which I am working on? I want to use your wood, and I do not happen to know of a mill which is qualified to take care of work of this kind."

Now, there is no doubt about the architect knowing several planing mills, at least; and it may appear strange to the casual reader that he should have addressed this letter to an organization of sawmill men who are not supposed to know much about the manufacture of interior woodwork, inasmuch as that is not in their line. Why should the architect go to them for information, instead of turning with confidence to the people in that line?

The explanation could, of course, be made that this organization, formed for the promotion of the interests of a certain wood, was naturally interested in seeing that the architect got in touch with the right planing mill and got the material he needed for his building job. Because it was advertising its willingness to furnish information of all kinds pertaining to the use of this product the architect was encouraged to call on it for assistance in locating the right concern to furnish stairway material of this particular kind. That seems to answer the question, at least superficially.

But, getting right down to bed-rock, it would seem that the planing mill people in the locality of this architect should have been sufficiently alive to make it not only unnecessary, but absurd, for anyone to think of turning in some other direction for information about mill work, no matter what phase the enquiry might take. In other words, if the operators of the planing mills in that section had been handling the architects along constructive and positive lines, this member of the profession would have been satisfied of their ability to serve him, and would not have asked a disinterested party to indicate a manufacturer of sufficient knowledge and ability to take care of an exceptionally important job.

Showing the Architect One's Ability

Practically every other line producing materials used in building construction makes a point of getting the architect's interest in this way. The building hardware man suggests that the architect come around and look at the model room finished with his products. The brick man has an exhibit showing how different kinds of brick look, laid up in walls and treated with different colors and kinds of mortar. The electrical man doesn't stop with merely asking for chances to figure, but goes to the extent of offering suggestions about the kind of fixtures to use and technical data regarding the specifications covering the wiring. The plumbing concern has model bathrooms and other features showing the way to use its products effectively, and, in short, the architect gets suggestions from everybody who wants to be represented in the building—except the planing mill man.

Jobbers of doors and other mill work that is carried in stock and sold by number, of course, have samples on view, and these can be seen by the architect. But for special jobs, such as that referred to by the architect whose letter was quoted, there is no medium by means of which he can get the information he wants. He must rely on the professional knowledge of the planing mill man, so to speak, and if he has not had it impressed on him that any particular member of the trade knows his business from this standpoint he is at a loss as to how to proceed.

This may furnish the clew to the mental condition which led to the letter of enquiry being written. Nobody who had been soliciting this architect had impressed him as being up to the mark in this particular direction. They knew the mechanical end of the business, and were ready to follow instructions; but they were unable to anticipate these by offering suggestions which would have a bearing on the problems of the architect and would assist him in designing an interior which would reflect credit upon him and upon the manufacturer, and would please the owner because of its distinctive and substantial character.

The writer has known a good many planing mill men, and most of them are above the average in intelligence. They are good business men, and handle the operation of their plants successfully. Yet few of them have seen the possibilities of promoting their business by making themselves distinctive in this fashion. Hardly any even take the trouble to use some particularly fine job as a means of advertising their ability to do good work.

One planing mill man, who handled a contract for some exceedingly fine oak interiors in a public building, had photos of these made and sent out a few hundred postcards. He didn't know exactly who would be interested, so his mailing list was not made up with a great deal of care with reference to the possibility of getting business from those who might see the card and be impressed with the extent and character of the work. This doubtful effort at advertising is typical of the indifferent attitude of most owners of planing mills.

Then, too, the competitive idea is uppermost. The average member of this business is so used to figuring estimates that he pays more attention to this than to creative or constructive work. He assumes that whatever work is coming out will be figured on in his office, and doesn't attempt to go beyond this. He fails to realize that before the plans are drawn and the blueprints sent out is the time to make hay with the architect, especially if the latter is not posted regarding the details of woodworking and the possibilities of the treatment of wood interiors.

Young Architects Anxious for Help

Many young architects are exceedingly anxious to make use of co-operation of this kind. It is sometimes said that men in various lines occasionally write the specifications covering their specialties, the architects having found that they are technically qualified to indicate how the work should be done, whereas they themselves are not. And, of course, it is assumed that this gives the man who handles this feature the inside track in getting the business. Even if the specifications are written so that all have an even chance, the architect regards the contractor who has given him the benefit of his technical knowledge with good-will, and, other things being equal, he is going to give him the business, is possible.

There is nothing illegitimate in offering an architect assistance based on knowledge of a certain field. It is logical to assume that the planing mill man understands woods better than an architect may be expected to do, and that he is in position to make intelligent suggestions regarding the use of woodwork. But it remains a fact that most of those making the rounds of the architects' offices for planing mills are not doing much along this line, either because they lack the knowledge or because they do not understand the possibilities of effort of this kind.

"Anything for us to-day?" is the greeting of many a solicitor who is supposed to cover the architects for the planing mill concern. Or perhaps the owner of the plant does not even have the architects called on regularly, but waits until the plans are displayed at the builders' exchange, or until he is invited by the architect to figure on the detail with which he is prepared to deal.

The result of all this is that the architect comes to regard the manufacturer of woodwork for his interiors as artisans purely and simply. He does not turn to them when he wants suggestions or when he is trying to bring about an unusual and attractive effect by means of the proper selection, manufacture, and finish of his materials. Yet the man who is producing the trim is the logical person to give advice, because of his experience with woods and because of his knowledge of sources of supply, costs of production, etc.

A great deal of what has been said here could be made to apply to the owner as well as the architect; but, in view of the importance of the latter, especially on jobs involving considerable expenditures, and his ability to influence the decision of the owner with reference to the character of the building in all its details, he is the man who should be given most attention.

Here is a big field in which the planing mill operator can work. He may not be prepared at present to undertake anything of this sort. There may be no one in his organization who is big enough or qualified by the right kind of training to go into an architect's office and talk to him about the details of his professional work. Yet the concern which had such a representative would find him in demand, and archi-

tects would get in the habit of relying on his advice and judgment as to what they should do in the matter of their interiors.

All of this would surely make for more business, just as it would make for better business. The associations of lumbermen are doing a good work to educate the public, including architects, regarding the desirability of their products. However, it can be said, without discounting the value of their efforts, that each has an axe to grind. The planing mill man who buys the materials his customers want is disinterested, and can really and truly advise without holding back anything. Everybody's interest would be promoted by a little more aggressive attitude on his part.

Prize Steer Sold for Halifax Relief

A record price for live stock was paid recently by the Harris Abattoir Company, Ltd., Toronto, for the grand champion steer "Black George," which carried off the honors at the Guelph Winter Fair and Toronto Fat Stock Show. This splendid animal, weighing 1,360 pounds, was purchased by the company at the price of $1 per pound, or a total of $1,360. Immediately after the purchase, Mr. James Harris, president of the company, donated the steer to be sold and the proceeds devoted to a fund for the relief of Halifax sufferers.

An Attractive Blotter

The Consumers' Cordage Company, Ltd., Montreal, Toronto, Halifax, St. John, N.B., Winnipeg, Quebec, and Vancouver, are distributing to buyers of rope some very neat and attractive blotters. The celluloid cover is printed in brown and black, with the figure of a lion as the feature—the "Lion Brand" is the brand of the company. The blotters are issued in three varieties, the difference being in the illustrations of rope on the cover. Any rope user desiring blotters can obtain them by writing to the head office in Montreal or to any of the branches.

Hon. Jules Allard, Quebec Minister of Crown Lands and Forests, in his annual report to June 30 last, states that the revenue totalled $1,753,624, which is a very satisfactory result when account is taken of the difficulty of securing sufficient labor and means of transporting lumber. The chief items of the revenue are: Ground rents, $347,505; cutting rights, $1,115,892; penalties for infractions of regulations, $29,354; as well as various other small amounts.

The board of the Riordon Pulp and Paper Company, Montreal, have elected three new directors—Messrs. C. B. Thorne, manager of the Hawkesbury mill; F. B. Whittet, secretary-treasurer of the company, and T. E. Warren, manager of the Ticonderoga Pulp and Paper Company, a subsidiary of the Riordon Company.

Dairy Cattle Barns

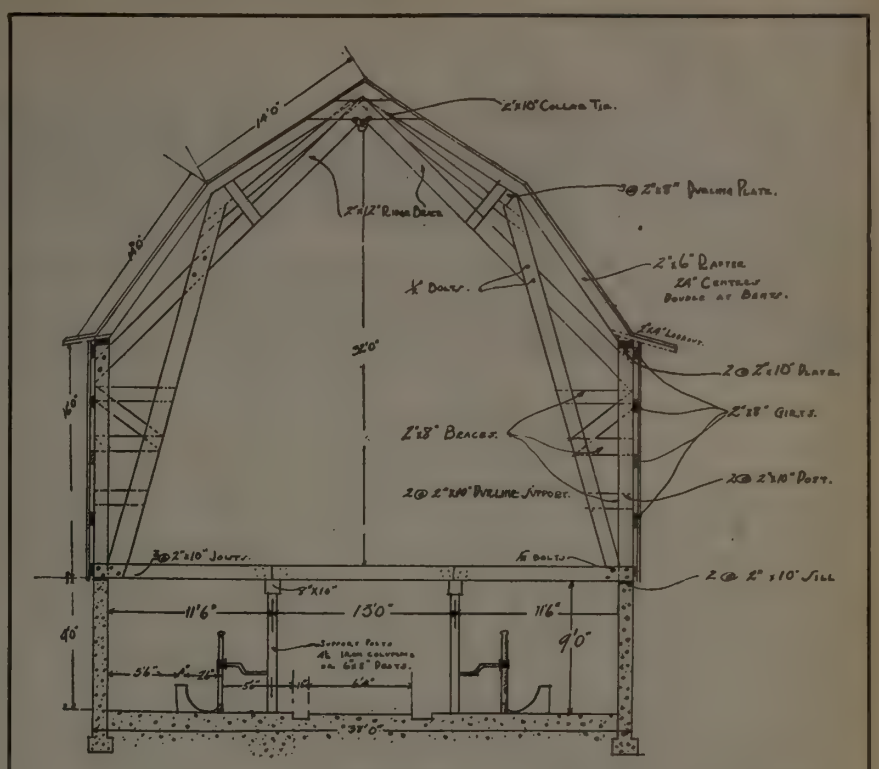
A bulletin (No. 253) on the subject of "Dairy Cattle" has been published by the Ontario Department of Agriculture. This bulletin contains, in addition to much valuable material in regard to cattle, an interesting discussion of cattle barns. Referring to the walls for the barns, the bulletin says:

"Where wood building material is available, or can be bought cheaply, this kind of wall is satisfactory, if the points are tight and windproof, and the frame of the barn is sufficiently strong to carry the maximum weight of barn and contents in all kinds of windstorms without twisting. Wooden walls are usually dry particularly if there is an air space in the wall and plenty of building paper is used. If the animals are pretty well crowded in a stable, ordinary walls, double-boarded, only on the outside of the studding, will keep in plenty of warmth except in our severest localities.

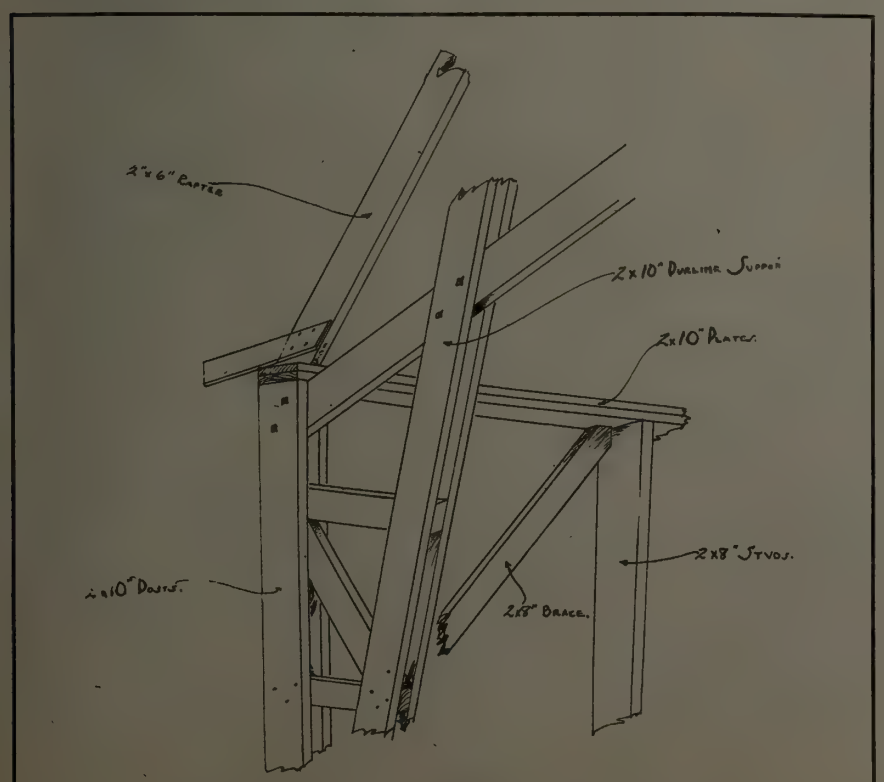
Referring to the framework of barns the bulletin says:

"The square timber frame of barns is giving place rapidly to plank frame construction, some details of which will be found in the illustrations. Brick and stone are now out of the question, in economical barn construction, on account of the high cost of material and labor of erecting."

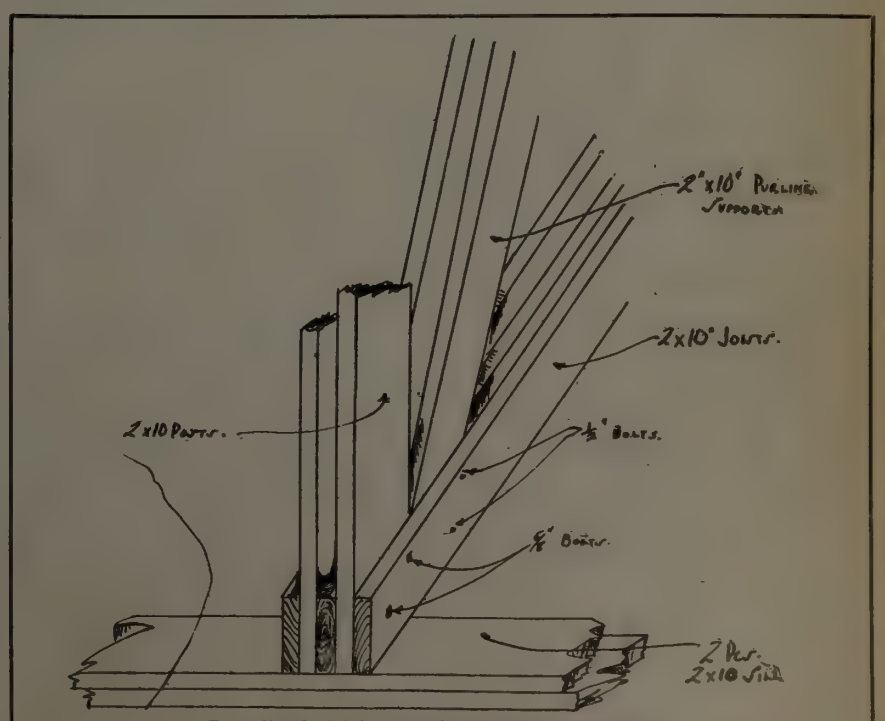
The bulletin also contains a number of illustrations and descriptions of the best methods of laying out the interior portions of cattle barns and descriptions of ventilating methods, much of which will be useful to retailers whose customers expect them to know how to plan and construct barn buildings.



Cross section of good plank frame barn. Bents are 12 to 14 feet apart. End bents have no ridge brace, but have 2 in. x 8 in. girts spiked crossways every 4 feet.



Detail at plate in plank frame construction.



Detail of sill in plank frame construction.

Logging Camp Sanitation

By Dr. W. N. Lipscomb, field representative of the American Red Cross*

The question of personal and community sanitation has always been a difficult one to enforce. The chief defects of the logging camps on the Pacific Coast are the result of indifference and ignorance on the part of managers and foremen, likewise the men, and the fact that most managers doubt whether the cost of improving a camp will yield dividends in the end. A great many men, as Herbert Kaufan says, are in the habit of looking forward to yesterday. Too many managers of logging camps are conducting them with a blind indifference to sanitation, which, put bluntly, simply means decent living. I do not think that intelligent men will deny that the present labor unrest in logging camps is due, to some extent, to living conditions; I realize that much is due to the ignorant being led by the vicious, but they should not be given this argument at least on which to base a campaign. After visiting the mining towns in Pennsylvania and looking over many settlements of other industrial enterprises, I will have to confess that I was rather amazed on going to Western Washington in 1915 and finding camp sanitary conditions as they were. I can repeat this after being a visitor in over 200 camps. I realize that a logging camp is merely a changing base of operation, and that too much expenditure cannot be made on a temporary abode. In commenting on the situation, you will realize that I am looking at it from a physician's standpoint, which I think should harmonize with that of a modern lumberman. Most of the recommendations here to be suggested will require a little more time on the part of the foreman in erecting a new camp, and of him and the men generally in keeping to a high standard. The average logging camp foreman needs a good deal of education along lines of sanitation, surgical emergencies, and handling men. His methods would not be sanctioned in many industries. The lumber industry is already too wasteful in men, money, and materials, and the Pacific Logging Congress could well adopt the following motto to counteract this: Intelligent standardization. It seems to me that a small committee, representing the congress, could, in conjunction with a physician having a complete knowledge of public health and sanitation, draft a set of standard rules to be followed by all. I realize that circumstances alter cases; that locations will have to be met perhaps in individual ways, but the plan as a whole seems feasible, and will obviate some of the difficulties in dealing with lumberjacks. One good thing about standardization, too, is that when this class of labor, obviously of a rapid, shifting type, finds out that one camp is about the same as another, I think it will have a tendency to hold the man longer in one place or else eliminate him from the woods entirely.

Every foreman should be instructed to use more judgment in the location of a camp. I recall one camp in Eastern Oregon, which is in a low, marshy place, the location being capable of improvement by moving the camp less than 200 yards, and it was not impossible to do this. Any camper who has had experience out of doors always pays attention to drainage in case of rain; any foreman constructing a camp should see to it that the proper drainage, especially from the cook-house and camp toilet, is secured.

The water supply of a camp is important, especially from the typhoid standpoint. I realize that most camps are supplied with water from springs and seepage pockets removed from same. A small amount of copper sulphate placed in this water every few days will make it safe. An excellent sand filter may be put in a spring by boarding up same and then placing a barrel or box well perforated, filling the intervening space with sand; the idea is to force the water through the sand, which makes a cheap and ideal filter. The water should be piped to the camp. It is well to remember that we have about 400,000 cases of typhoid in this country annually, about 10,000 cases being fatal, and an average time loss in each of from eight to ten weeks. I will admit the flies are more responsible for this than water, and both dangers should be eliminated. The water should be handled at point of delivery by hydrant system into barrels in the cook-house. The average cook does not protect these barrels sufficiently. I might mention here that logging managers generally should follow an army rule and insist that the cook be vaccinated against typhoid. A common drinking cup has been called a national disgrace because it is a carrier of syphilis and tuberculosis. My suggestion in regard to a drinking fountain for a camp is one more easily carried out where the hydrant system is used. Make a double elbow at the hydrant with a control faucet, the last few inches of the pipe protruding vertically. Men should be encouraged to use their own cups, and cheap cups should be for sale in camp commissaries. The man with the suspicious sore mouth should be referred to the contract surgeon. In suspicious localities—that is, near places where typhoid fever has been—bacteriologic tests should be made of the water. Almost any state board of health will assay samples. Another thing which makes this worth while is the estimation of the scale-forming content so far as locomotive and donkey boilers are concerned.

*Delivered before the Pacific Logging Congress.

Dispose of Waste

Solid garbage.—This can be given to hogs, which should be located not less than 200 feet from the cook-house and against direction of prevailing winds; it can be drained into a septic tank or pit, which should be covered to the extent of being fly-proof. Have it burned daily. If none of this is possible, have garbage cans made of zinc, with air-tight tops, which can be used for conveying a suitable distance from camp. I recall one camp where the cook created an open cesspool less than twenty feet from the kitchen. Such a cook as this should be replaced immediately.

Some camps are screened against flies as to cook-house; all should be. With some that are screened the camp carpenter has been careless, or the cook. Doors should be weighed so as to be self-closing, and should be fitted well into frame. This will apply also to the camp toilet. Lieut.-Col. Keefer, professor of military hygiene, outlines the five following methods of ridding the place of flies where screens are not effective or possible: "First, sticky fly-paper; second, saucers containing 1 per cent. formalin with a little sugar; third, arsenic paper in water; fourth, fly traps; fifth, Persian insect powder (pyrethrum), the burning of which produces fumes which stupefy the insect. These fall to the floor, and can be swept up and burned before they revive."

I have three criticisms of camp cooks—they are too friendly to the fly, use too much grease, and furnish too much heavy pastry. However, I will say that the food of the average logging camp is superior in quantity and quality to most other industrial concerns. In other words, the average logger is lucky to get the food he does for the price. Dr. Shields, whom many of you will recall, made a rather unique observation some time ago, namely, that if the "No Talking" signs were taken down the men would benefit as the result of slower eating. I think it a good rule to enforce that no cook should be allowed to eat or sleep in the kitchen, and that he be directly responsible to the camp foreman for the disposal of waste. Many superintendents will no doubt ignore this and resort to the old-fashioned policy "Let well enough alone." However, I think the average camp cook, though being an autocratic individual and resenting direct authority imposed, is very amenable to suggestions; such has been my experience. Some are difficult to deal with because they possess what I term the intolerance of ignorance.

The average camp toilet is a disgrace. It is too close to the bunkhouses, too much open to flies, and the location results in contamination of streams, and typhoid and intestinal diseases, often traceable to the fly as an intermediary agent between the toilet and the food. I know one industrial surgeon who has not had a case of typhoid infection among his men for several years, and he attributes it to the one simple fact that employers have co-operated with him in building fly-proof toilet. Contract surgeons are not and do not claim to be sanitary experts, but they will co-operate with you along this line.

Every man should carry his own towel. I quote from the report of the United States Public Health Service: "In regard to towels, there is no question but that the common towel is the obvious means of conveying infection, and should never be used in any industrial plant." The roller towel is a menace, and should not be used.

Bathing facilities can be installed at small cost and give general

satisfaction. A bathtub is expensive, and should not be used by a community group. The shower is the most feasible. One of the best arrangements that I have seen in any camp is that of Camp 7, Simpson Logging Company, Shelton, Washington. This is a car camp, and one car is assigned to this purpose. There is a heater in the middle, reconstructed from an old donkey boiler, with a steel rack around, on which to hang clothes. Along one side of the car is a section of about twelve hydrants for hand-washing and on the other about six deep basins for clothes. In the other end of the car are two showers in individual compartments. The president of this company and the foreman of the camp agree that such a system pays. The study of the relation of environment to the health and efficiency of the worker and the application of necessary remedial measures constitute sufficient industrial hygiene. I am not of the sentimental disposition which tries to mollycoddle a lumberjack, but I am suggesting these things purely from the standpoint of health, comfort, and increased satisfaction among your employees, three great factors of human efficiency. It has been demonstrated that if you can increase the self-respect and general well-being of a man you can double his output.

Living Quarters

The large bunkhouse is undesirable as a type. When a mass of men, say 35, are put under one roof, police regulation could hardly maintain hygiene. I know of one bunkhouse holding about 80 men, with a very small washing place therein, where several men acquired gonorrheal infection of the eyes from one man who had come into camp with a fresh infection. While such is unusual, the further possibilities would naturally be reduced by a small bunkhouse. Another point about this place was that the only ventilation afforded was by a door in the front and back. No wonder these men were dissatisfied. I believe that camp managers pay directly for this overcrowding in loss of efficiency, especially for the morning's work, because the men get up feeling groggy, often with a headache and a grouch, and the type of work they do looks to me more like scientific loafing. It is no wonder they feel this way, as at night they hang up their clothes, build a hot fire, close all the doors, and sleep under groundhog conditions. I know of one company, for instance, manufacturing a food product, who spent $42,000 in one year on lunch rooms, gymnasiums, night schools, and sanitation (these latter two are exceedingly worth while to institute in logging camp). It may be worth while, too, to note that at the end of the year this company showed an increased, rather than a decreased, dividend. It is an obvious fact, proved by hundreds of employers, notably in factories, that a man does more and better work when he is contented and happy than when listless and in half-way health. Of course, none will deny that vicious agitators have been to a large measure responsible for logging camp troubles on the coast. I do not think that it can be denied, further, that vicious living conditions are to some extent responsible. Better sanitation will recompense the employer in better work. It is difficult to make many men see this, because they will not take the trouble to observe what good results this has accomplished elsewhere. It is a poor employer who says that he does not care a whoop how men live just so they do their work. When he takes such a stand he is drawing on his own checking account. My observation, too, has been that men suffer more from colds and minor disabilities, which hinder efficient work, who live in these large bunkhouses than in the smaller ones. This loss of efficiency is aggravating to the man and financially destructive to production.

The small bunkhouse is, to my mind, ideal, and by that I mean four to eight men to a compartment. Many companies have already adopted this and seem better satisfied. I wish to quote from Keen's "Military Surgery":

"Experience has demonstrated that not less than 60 square feet of floor space and 600 cubic feet air space per man is essential to preserve the health of troops in squad rooms, but these figures are really lower than is consistent with safety. Medical authorities are of the opinion that the minimum floor space should be 70 square feet, air space 600 cubic feet, normal ceiling height 12 feet."

There are several methods of ventilating bunkhouses — place transoms over all doors of all rooms; provide good size openings above doors or windows at the end of the hall. Since a lumberjack likes to close these from habit, I would suggest a ventilator in the top of the building, essentially a roofed-over chimney which cannot be tampered with by any darn fool who wants to sleep like a prairie dog. If the bunkhouse or car is above a grating, place the stove so as to admit air from below. A slide cover could be made for this grating. The logger should be educated to the fact that night air is good instead of bad

A camp car is, to my mind, an excellent method of housing men, and, from my observation, has been the cleanest. It presents six sides to the air and is better ventilated. The United States army, with its method of sanitation in camp, furnishes a fine object lesson to any employer of labor who will take the trouble to investigate. In many places it is immaterial that bunkhouses be screened, but all cookhouses should be. Discussing the latter, I recall being a visitor to one camp which was blessed with so many flies that the casual observer could not tell the difference between custard and mince pie.

My observation is that foremen are very little interested in keeping a camp clean, and that the bull cook is inherently lazy. The latter should be required to scour the floor and air the bedding at least once a week, and the custom of keeping bunkhouses closed all day long should be abandoned. A great many people shed crocodile tears about the hardships of the soldiers. Perhaps this is true, but one fact remains that his living quarters are kept as clean as possible, and definite men are held responsible for this. There is a much debated question about furnishing employees bedding in camps. Personally, I am in favor of this. The steel bunk, too, is cleaner, more easily moved and disinfected, and, I believe, cheaper in the long run than the old-style wooden bunk, which is especially difficult to rid of vermin.

Supervision of Health

Not enough precaution is taken in regard to the health of the men in camps. More co-operation should exist between the operator and the contract surgeon. For instance, if one camp foreman had consulted his contract surgeon before placing a certain camp, his water supply would not have been an open stream within fifteen feet of the line of bunk cars. I do not believe that the man suffering from an active venereal disease should be hired. Here I realize I am placing a hardship upon employers, when labor is scarce, and one on the man who seeks work to live. Most of the men infected with this either allow it to become incurably chronic or spend all they make on patent medicines and ignorant quacks. The time is coming, and has come in a good many industries, when a physical examination of all employees will be an accepted fact. Experience in several industries to-day shows that workmen first objected strenuously to the medical examination, but now, after several years' trial, not only fail to resent, but invite it. This is simple preventive medicine. When men are scarce and hard to get; when they are untrained for anything else, it is a difficult thing to eliminate them because of this. Army medical officers, much as the army has always needed men, have always been inflexible in refusing such unfortunates. Personally, I think that a man should report for examination to the contract surgeon before reporting to the mill or camp foreman.

I wish to quote from a book on business efficiency:

"The duties of the employer to the employee have been enlarged in recent years, and are not merely those of the purchaser of the employee's time and service for money. The enlightened spirit of the age, based upon the experience of the past, has thrown upon employers other duties which involve a proper regard for the comfort, health, safety, and well-being of the employe, and unless it is shown to be wasteful of the company's money and unproductive of beneficial results, the practice may stand as well within the scope of its business."

This is an extract from a judgment of the Appellate Division of the Supreme Court of New York. I wish to quote further from this book:

"The new industrial philosophy is this: 'Nothing is so valuable economically as a man. To injure or to kill him is to destroy the one essential in the scheme of world-wide civilization and prosperity. He can produce at the top of his bent; can consume equally. Injury and death are the fruits of ignorance, recklessness, and greed. A death toll is no part of a well-managed industry. It is wasteful, wantonly wasteful. The saving of life thus becomes an industrial issue.'"

I realize that it means some expense and individual trouble to enforce sanitary rules among a group of men who are, for the most part, ignorant and fatalistic, but I believe it exceedingly worth while. In a highly competitive world of high prices, labor troubles, individual inefficiency and bad health should be obviated by all means, as they add too much to the cost of an already high overhead expense. The principles that I have laid out are not difficult to carry out, and in time will yield results. There is too great a disposition on the part of logging managers to discount any innovation, especially one not introduced by a member of their occupation. Decent sanitation, implying decent living, is an industrial asset, not an idealistic dream. I wish to reiterate my suggestion that a committee of sanitation standards in camps be elected or appointed, to include some physician well up in sanitation and to co-operate with the various boards of health. This committee must be able to see with a clear eye, not blinded by the indifferent, careless methods of dealing with men which have largely characterized individual performances in the past. This committee should receive the whole-souled co-operation of every logging company.

A report from Powell River, B.C., states that all the shingle bolt and logging camps on Powell Lake have been working with full crews, making every effort to get as much stock cut as possible before the arrival of snow.

How to Hold an Efficient Labor Force

Elements of Personal Relation Between Employer and Employee That Regulate the Profitableness of the Labor Output

By Frank H. Lamb*

The attention given to the problem of securing and keeping an efficient labor force has not been in keeping with that devoted to the other details of business management, nor has it been commensurate with the cost of labor involved. This has often been due, doubtless, to the development of most operations from a small beginning, in which the owner or manager was able personally to select his co-workers from men long known to him, and whose ability he has ascertained often by working side by side with them.

A railroad president and a public service commission valuation expert were discussing the valuation of the railroad properties just made by the commission. The president pointed out the fact that the commission experts had entirely omitted one of the most valuable assets of the company. Surprised, the expert asked what it could be. "Our labor organization," responded the president. "It has taken us years of effort to build up this body of workers. They are an asset worth millions to this road." The labor troubles in the logging industry during the past few months should convince the logging operator that labor is the most important element in a successful operation, and that good management should include a study of labor problems.

The great trouble with most labor efforts has been that they are disjointed, casual measures, undertaken often in a spirit of corporate pride, and without any relation to the basic principles underlying the problem. After every disturbance the employer launches some scheme of patriotism, for instance, that in most cases is only a play to the galleries, and forgotten as soon as men become a little more plentiful or satisfied. Another company, inspired by a desire to do something big, goes into elaborate welfare work, without any consideration of or correlation with, basic labor principles, with the result that the undertaking is a failure, and one more instance of the ingratitude of the working man is heralded forth.

What are some of the basic principles in labor maintenance and how are they to be applied to the labor problem of the logging industry? First, labor is human, not a machine, and the measure of a successful operation is the combined produce of a low cost for labor per unit of output and a low ratio of labor turnover. Low labor cost per unit of output of itself is not always desirable if, for instance, it is accompanied by evidences of a constant shifting of workers, since to build a labor organization on a stable, sound basis there must be some continuity to the labor force. To judge labor results entirely on the basis of per unit cost is to sink labor to the level of a machine. Labor, possessing a mind and soul, its service is not rendered entirely in any one day's work. There is loyalty to the employer and the opportunity of serving him by the exercise of a mentality that is often worth more than the actual manual services.

A machine that performs a certain operation at the least total cost is the superior machine for that operation. The great trouble with most of our labor plans has been that we have judged labor on the same basis. For example, I have heard large logging operators declare they would not employ any more married men than necessary, because the liability, in case of accidents, was greater. Because of the passage of the workmen's compensation law this objection no longer exists. Still, only during the past few months have most of our employers been able to see the advantage of having a labor force comprised largely of married men, who, from the fact of being married, are necessarily more settled, more loyal, and more conservative.

A constantly shifting labor force, no matter how efficient it may other wise be, leads to disorganization and loss of effort. A machine calls for only a mechanical co-ordination of appliances. The efficient work of any workman, and particularly is this true of logging, calls for a high order of team work. The best football team is seldom made up of stars. It is one with the best developed team work. It is absolutely impossible to develop an efficient labor organization with a labor turnover of 20 or 30 per cent. per month. Even 10 per cent. is suicidal.

Itinerant Labor

The young, active man, unburdened with family and with physical forces unimpaired through long struggles to maintain a family, may often be a stronger and harder worker. Too often he is a member of the great army of itinerant labor. Working in the woods in winter when other jobs are scarce, and with spring seeking the construction camp or harvest fields, satisfied only for a few weeks at a time with any one job, he shifts across the face of the country, receiving good wages when at work, but spending all his earnings in finding the next job. Itinerant, or casual, labor is a necessity with our system as it now exists, but it is an evil which, bred in necessity, grows through force of habit until the workman is incapable of staying steadily in any one position, no matter what the opportunities or the pay.

In the terms of the cost-keeper, it is immaterial what the nationality of a workman may be, but the labor economist has long recognized the principle that men who are citizens of the country, interested in its well-being contributing through taxation to its upkeep and who have the intelligence to make use of its institutions, are preferable to large bodies of aliens who, through long centuries of oppressive legislation and lack of educational facilities, are unable to appreciate free institutions and mistake liberty for license. The Americanization of workmen is something that needs more than a flag-raising and a declaration of intention that is only borne of necessity. It means personal study of men, the constsant endeavor to show them the advantages of citizenship, the opportunity to learn the language, the customs, and laws of the nation. This can be done most effectively by throwing them with American men in their daily work. The labor force that is made up predominantly of any alien nationality is a menace to the employer and a greater menace to the country. Such bodies of men retain their own language, customs, and prejudices. The only thing they absorb from the outside is the teaching of the agitator and labor exploiter.

The religious, political, or economical principles of the workman is of little moment to the cost-keeper. To the wise employer, however, these mental characteristics are all-important. The employer expects not only efficient physical service, but also the exercise of judgment and intelligence in his behalf. The state of mind that breeds sabotage and syndicalism is readily recognized as dangerous, but few employers take the pains to ascertain if the disposition and principles of the workman would at all times allow full co-operation and a willingness to use his mind as well as his body for the benefit of his employer. More rarely does he reward the exercise of judgment and intelligent co-operation when it is given.

Secondly—Under our constitution and laws all men are equal. Any negotiation between freemen must be as between equals. The workingman wants to be treated as the equal of the representatives of capital in all matters. Lack of comprehension of this basis of equality is responsible for the failure of most of the welfare work attempted by many corporations. Elaborate plans are conceived and carried out on a basis of the dependency of labor on capital. The benefits sought to be bestowed are forced upon the worker from above, and are not evolved through co-operation. Instead of securing the advice and approval of those it is planned to benefit, the bestowal becomes one of forced charity, the interest of the worker is antagonized, and, of course, the undertaking is a failure.

Developing the Workman's Pride in His Task

Thirdly—The opinions of the worker are formed as a composite from the information he receives from various sources. The actual results of the conduct of most businesses is to him a closed book. What he is told is so often belied by surface indications that he gradually comes to believes nothing from the employer. Employers meet and howl lustily over the fact that their particular business is in a bad way and they are facing instant ruin. The next moment they whirl away in the latest model motor car and envelop in a swirl of dust some worker on whose judgment the safety of thousands of dollars of equipment depends. No mention is ever made of the times when profits are normal or better for fear that the worker will ask for more wages. As a result, the worker hears only calamity howls and, remembering when the owner only a few years before had about as much as he has now, he puts his employer down as a constant liar and listens unto the agitator, who is likewise a liar, all the more fervently.

The self-respecting workman wants to work for the successful concern. There is pride in serving the successful. The large corporations, such as the railroads, the Standard Oil, and United States Steel Corporation, are more successful in maintaining an efficient labor force because their businesses are successful and because the figures as to their profits are known by all who want to look them up. Secrecy begets inflated ideas, particularly as to profits, and profits that look like piracy when unexplained would be a matter of course if the employer sought to explain to the workmen more of the financial side of his business.

In close corporations full publicity is perhaps not desirable, but a closer contact between the management and the foremen and more responsible men would circulate largely throughout the entire force

*An address delivered before the Pacific Logging Congress.

and correct much misunderstanding. This can be done in foremen conferences, or better, when possible, by having the stock of the corporation held by the workmen as generally as possible. This is the underlying basis of the stock distribution plan of the United States Steel Corporation.

Fourthly—In the compensation of the workman the tendency under the expanding growth of business from the small to the large operation and the tendency of all labor wage endeavors is toward a fixed price for the particular position or job. This tendency of minimum wages fixed at a point as high as possible results in the fixed wage being the minimum. The workman who cannot earn the wage is either tolerated when labor is scarce, and his more efficient fellow-workman makes up what he does not earn, or he is discharged and another man given the job. If fidelity, intelligence, loyalty to employer and length of service are considerations as well as low cost per unit of product, the single wage standard is wrong. Under its operation the new man on the job, who may work a day or a week and whose principles are not averse to sabotage or syndicalism, is paid as much as the man who has been on the job for years, and who perhaps not physically able to do as much work as the other, can, however, be relied upon in emergencies to stay with his employer and to serve him faithfully and intelligently on all occasions.

How best to correct this injustice under present conditions is a big question, and I will leave it by enunciating the principle that there will never be a just system of wages until the wage scale is made out on the basis of the minimum wage for the minimum output and greater output, fidelity, length of service, and superior intelligence is rewarded over and above the minimum scale.

Square Dealing Most Important

Fifthly—The old truism that justice is the best policy applies with particular emphasis to the conduct of labor management. Absolute justice must govern in all labor considerations. In order that the worker may recognize justness sometimes the employer must be more than just. There are so many and varied relations that it is impossible to define what is just. It is a human relation incapable of definition in commercial or legal terms. The measure of justice is the satisfaction of the parties involved. If it is a matter of retention of a position, length of service, and fidelity to employer must count more than a strong back and a weak or unsound head. Few employees will deliberately seek to ruin a business through wage exactions if they feel they are being treated justly. Under the old custom of personal supervision the honest employer was often a determining factor in seeking employment; under the impersonal methods and managements of the larger corporations justice is replaced by rules and regulations. Since labor is human, however, justice demands that each case be treated on its merits.

Space is lacking for the application of these five principles in labor maintenance to every phase of labor management. Suffice it to say that they should be governing principles in hiring labor in order to secure a proper labor force. If applied, the workers employed would be efficient to a reasonable degree; they would be men of substance and character, preferably men with family and influence. They would be largely American citizens, because they would be more in sympathy with the institutions and laws of the nation. They would be men who could be trusted in emergencies.

In maintaining such an organization the management would gauge its wage scale on the basis of what it could economically pay and not how little it needs pay. Its wage schedule would be a minimum scale, and long, faithful service and dependability would be rewarded by an increase over the scale.

Whether to provide for these increases by a bonus system, stock distribution, or cash dividends is a matter that must be decided for each operation after a full investigation.

In its living conditions the employer should constantly seek to improve conditions as fast as the employee is ready to utilize such improvements. It should, however, initiate such betterments through co-operation with the workers and not force its measures arbitrarily upon them. Logging operations being of a temporary nature, offer a difficult field to the installation of model living quarters. The old-style camp, with its crowding, lack of proper ventilation, darkness, poor heating, and personally supplied bedding of varying degrees of thickness and filth, is a relic of the age when labor was not particular.

Good Camp Quarters a Great Help

The more modern car camps were a great improvement, in that they were more sanitary and provided with some modern conveniences, such as springs, mattresses, dry rooms, lights, and baths. Their chief objection is the overcrowding. A standard pattern car allows only 40 square feet of floor space per man, a space only six feet by a little over six feet. This is not sufficient with 16 to 20 men in a single car. The ideal camp is the central semi-permanent village, with married men living in cottages with attached gardens, the single men in quarters where each man could have a room with bedding and linen furnished and kept in good condition, and a central dining-room. For the transportation of the men to work a light steam or gasoline locomotive and trailers could be employed, and the cost would be quickly absorbed in additional efficiency, greater satisfaction, and the opportunity of selecting your labor instead of taking what offered.

In strictly welfare work the principles enumerated are essential to success. There must be no paternalism. It is offensive and spells failure at once. It is for this reason that the Y.M.C.A. is so successful in carrying on this line of work. They work with the men and not over them. They secure their co-operation and make them pay part of the bills. They treat the men as equal human beings and not as objects of charity.

In an analysis of the results of several manufacturing plants the managers of two that showed the greatest efficiency claimed their results were due to two diametrically opposite methods of management. So in labor maintenance there is no blazed trail plainly marked for everyone to follow. The human element and local conditions call for different treatment in nearly every case. Elaborate efforts are failures in one case while an apparent lack of any effort is equally as successful in another. Analyze any of these cases and you will find the failures due to disregard of one or more of the basic principles I have enumerated and the successful concerns unconsciously operating under a plan that recognizes most of the five principles.

Let us, therefore, reiterate the five basic principles for clearness' sake. First: Labor is human, not a machine, and the measure of successful labor maintenance is low cost per unit of output plus labor turnover. The product is contentment, satisfaction, and loyalty of employees. Second: The workman is the equal of the employer and expects to be treated as such. There should be less patriotism and more brotherhood. Third: Labor as a co-worker is entitled to correct information regarding business generally; unless this is supplied by the employer and in such a way that its truth is self-evident, he is the prey of the designing demagogue. Fourth: To receive faithful, continuous service and individual loyalty the rewards for labor must be based upon a system of merit and not simply a single wage standard. Fifth: Justice must govern all labor adjustments. The worker who does not absolutely trust his employer to do the just thing under all circumstances will lack the esprit de corps necessary in successful labor maintenance.

New Canadian Manager for S. F. Bowser & Co., Inc.

Mr. L. P. Murray, former Mid-western manager of S. F. Bowser & Co., Inc., manufacturers of oil tanks, pumps, and storage systems, has been appointed to the position of Canadian manager. The advancement gives Mr. Murray jurisdiction over the Canadian office, factory, and sales force. As manager of the Chicago district office and as Mid-western manager, Mr. Murray has more than proved his fitness for his new position. Since the death of Mr. W. R. Hance, the Canadian plant has been ably directed by Mr. Harry Christie, who will now give the greater part of his attention to taking charge of the Canadian sales organization. With two such experienced men in Canada the continued success of the Canadian branch is assured.

Assistant Editor

for the

"Canada Lumberman"

The publishers of this paper desire to engage an Assistant Editor—a man who knows the lumber business and has some literary ability. Must be energetic, with keen interest in his work, suggest and carry out improvements, and assume responsibility. Whole time required. Opportunities for the right man. Apply personally or by letter to

The Manager,
"Canada Lumberman & Woodworker,'
347 Adelaide Street West, Toronto

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) $2.10 per inch, each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted—Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Wanted

Large size Elm Logs wanted. Address P. O. Box 5, Papineauville, Que. 21-2

Wanted—Lumber

Slabs and Edgings—Hardwood and softwood; five to five hundred cars, for cash. Box No. 641, Canada Lumberman, Toronto. 21-24

For Sale—Lumber

FOR SALE—Ten cars Heavy White Oak Ship Timbers for immediate delivery. Apply

Georgian Bay Shipbuilding Co.,
22-1 Midland, Ont.

For Sale

Five cars of Bird's Eye Maple in Logs, suitable for veneer or sawed to order.

Quebec Lumber Supply & Export Co.,
55 St. Francois Xavier Street,
24 Montreal, Que.

Ties and Shingles For Sale

15,000 Spruce Ties.
15,000 Cedar and Hemlock Ties.
A few cars of cedar shingles.

ST. LAWRENCE LUMBER CO.,
81 St. Peter St.,
24 Quebec, Que.

Lumber For Sale

Two cars 4 x 4 Maple Boxed Hearts.
One car 5 x 5 Maple Boxed Hearts.
One car 6 x 6 Maple Boxed Hearts.
Seven cars Fir Doors.
Three cars Fir Columns.

GEO. C. GOODFELLOW,
23-23 Montreal, Que.

For Sale—Machinery

Steel Rails For Sale

A small quantity of 20 lb. light re-laying rails, for sale for immediate delivery. Apply Box 651, Canada Lumberman, Toronto. 23-24

For Sale

Complete set Heading machinery. Can be seen running.

REID BROS.,
24-t.f. Bothwell, Ont.

FOR SALE—5/8 in., 3/4 in., 7/8 in. diam. wire rope, in lengths from 50 to 200 ft., suitable for guying purposes or for making booms, 4c per foot net in any size or quantity.

H. W. PETRIE, LIMITED,
22-1 Toronto, Ont.

For Sale

Very fine 18 in. and 32 in. x 42 in. Cross Compound "Brown" Engine, approximately 400 h.p., built by Polson Iron Works. Has 44 in. x 16 ft. Belt Pulley. Splendid condition. Immediate delivery. Box 654, Canada Lumberman, Toronto. 24-t.f.

Machinery For Sale

75 h.p. also 100 h.p. engine, heavy log jack and chain, Hamilton 3 block carriage, saw frame, 4 saw trimmer, Berlin No. 94 Planer, 12-in. 4 side Sticker, 30-in. bracket saw, shaper, automatic saw sharpener, Murray lath bolter, Rogers lath machine. Good condition.

VIGARS-SHEAR LUMBER CO.,
24-3 Port Arthur, Ont.

Planing Mill Machinery For Sale

Only in use for 18 months and almost as good as new.
1 Q. Y. Matcher, Gourlay.
1 Butting Saw, Gourlay.
1 Rip Saw, Gourlay.
1 Sticker, Ballantyne.
1 Scroll Saw, Ballantyne.
1 Surface Planer, Gourlay.
1 Heavy Band Resaw, Cowan.
1 Emery Grinder.
1 Large Fan, McEchran.
1 40 H.P. Westinghouse Electric Motor.
Saws, knives, dressing heads, etc., etc.

OTTAWA LUMBER COMPANY,
22 Metcalfe Street,
22-1 Ottawa, Ont.

Wanted—Machinery

Wanted—Circular Slab Resaw, second hand, in good condition.

York & Sunbury Milling Co., Ltd.,
23-2 Fredericton, N.B.

Wanted

Second-hand Inserted Tooth Saw about fifty-six inches, and three head block carriage.

DAVID EIDL,
24-1 Mildmay, Ont.

Refuse Burner Wanted

Second-hand Refuse Burner in good condition, 12 to 15 feet in diameter, and moderate height. Address with full particulars and price.

REAMSBOTTOM & EDWARDS,
20-21-22 Connaught Station, Ontario.

We are in the market for the following second-hand equipment: Power plant for fifty-foot, shoal draft tug boat; double engines preferred; one slab resaw; one double saw, automatic feed; tie mill. Address with full particulars and price,

Reamsbottom & Edwards,
22-1 Connaught Station, Ont.

Wanted to Purchase

One Steam Feed.
One Jumbo Edger.
One Nigger Canter.
Write all particulars to the

PIERCE JACOBS LUMBER CO.,
24 Timmins, Ont.

Wanted—Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

Thoroughly competent lumber salesman is open for position with good firm on road or in office. Box 650, Canada Lumberman, Toronto. 23-24

YOUNG MAN, six years' experience as stenographer and bookkeeper in lumber business, desires change. Best of references. Box 629, Canada Lumberman, Toronto, Ont. 19-2

LADY STENOGRAPHER, experienced in lumber business, desires position in Toronto with opportunity of advancement. Four years' High School education. Good references. Box 653, Canada Lumberman, Toronto. 24

Position wanted by man of experience in both wholesale and retail lumber trade. Well acquainted also with the travelling end of the work. Available at once. Can furnish excellent recommendations. Apply Box 642, Canada Lumberman, Toronto, Ont. 22-1

Wanted—Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

First class bookkeeper for lumber and planing mill business. Young married man with thorough knowledge. Commencing at New Year's. State salary and give experience. Box 652, Canada Lumberman, Toronto, Ont. 23-1

Business Chances

For Sale

2,000 acres well timbered bush in township of Sinclair, new mill, stable and camps, Loading point, Huntsville. Reason for selling, ill-health. Apply to

HOLINSHEAD & ROGERS,
21-24 Huntsville, Ont.

Tide-Water Stumpage For Sale or Exchange

For sale, or will exchange for good ranch or farm land, B. C. Tide-water stumpage, cruised and surveyed.

CARL BLOCK,
19-t.f. Peoria, Illinois.

Mill Plant and Limits For Sale

43 Miles Limits on 31 Mile Lake, Gatineau Valley, containing Basswood, Spruce, Fir, Pine, Cedar, Birch, Maple and Pulpwood.

New Waterous 8 ft. Improved Double Cut Band Mill complete. Steam Alligator, Boats, Sleighs, Wagons, Harness, etc. For further particulars apply to

A. W. STEVENSON,
P. O. Box 2624,
8-t.f. Montreal, Que.

For Sale

About five or six tons of 3/4 and 9/16 tested chain in lengths from 27 ft. to 30 ft. with ring on one end and hook on the other end. Address Drawer "F," Sarnia, Ont. 19-t.f.

FOR SALE as a Going Concern Saw Mill and One Hundred Square Miles Crown Lands

Mill capable of sawing eight million superficial feet per year. New boilers, good engine and pumps, gang and rotary shingle and lath machines and planer. Railway siding in yard, also water shipping.

This property is situated in a thriving centre where labor is available. Good general store, boarding house and other buildings in connection with property. Good reasons given for selling.

No one need apply except bona fide purchasers.

Apply, Lumber, Box 648, Canada Lumberman and Woodworker, Toronto, Ont. 22-t.f.

TENDERS for Pulpwood Limit

Tenders will be received by the undersigned up to and including the seventeenth day of December next for the right to cut pulpwood and pine timber on a certain area situate in the vicinity of the Kapuskasing River in the Districts of Timiskaming and Algoma.

Tenderers are to offer a flat rate per cord for all classes of pulpwood, whether spruce or other woods. The successful tenderer shall be required to pay for the Red and White Pine on the limit a flat rate of $10 per thousand feet board measure.

The successful tenderer shall also be required to erect a mill or mills on or near the territory, and to manufacture the wood into pulp and paper in the Province of Ontario, in accordance with the terms and conditions of sale which can be had on application to the Department.

Parties making tender will be required to deposit with their tender a marked cheque payable to the Honourable the Treasurer of the Province of Ontario, for Twenty-five Thousand Dollars ($25,000.00), which amount will be forfeited in the event of their not entering into agreement to carry out conditions, etc. The said Twenty-five Thousand Dollars ($25,000.00) will be held by the Department until such time as the terms and conditions of the agreement to be entered into have been complied with and the said mills erected, equipped and in operation. The said sum may then be applied in such amounts and at such times as the Minister of Lands, Forests and Mines may direct in payment of accounts for dues or for any other obligation due the Crown until the whole sum has been applied.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

G. H. FERGUSON,
Minister of Lands, Forests and Mines.
Toronto, September 19th, 1917.

N.B.—No unauthorized publication of this notice will be paid for. 20-24

Jobbers Wanted

We wish to let several contracts to take out logs on Berth No. 6, being broken front lying between the Magnetawan and French Rivers. This berth is all convenient to Canadian Northern Railway.

John Harrison & Sons Company, Limited,
Saw and Planing Mills,
9-t.f. Owen Sound, Ont.

Hoo-Hoo Wants Soldiers' Names

The names and addresses of lumbermen who have joined the ranks of either the American or Canadian army or navy are wanted by E. D. Tennant, secretary Concatenated Order of Hoo-Hoo, St. Louis, Mo. With the assistance of the trade press and lumbermen everywhere, the Order of Hoo-Hoo has undertaken to raise a fund for supplying comforts to lumbermen who are fighting for their country. Excellent progress is being made in the raising of this fund, and it is desired to place upon the roll of honor the name of every lumberman who has joined the army or navy of either Canada or the United States. Mr. Tennant says: "I have talked with a number of lumbermen who have already done their bit in the trenches. They say the men need tobacco, papers, magazines, and letters, as well as numerous comforts. While many hear regularly from relatives, others do not, and at times become very despondent; but when they hear from home, no matter in what form, it helps to make them realize that their efforts are appreciated. In fact, a Canadian officer told me his men were always ready for the hardest tasks after hearing from home or receiving home papers and comforts."

Barbados Lumber Market

A despatch from Barbados, under date of Nov. 14, says:

Stocks of lumber are low, particularly in spruce and white pine, the latter being practically out of supply. During the year the lumber trade has been quite up to the average of other years. The lumber has been coming down by schooner as formerly, small lots, however, by the Royal Mail. Freight rates are now quoted at $12 per M., as against $6 and $7 two years ago. Owing to the number of factories erected and increased building operations throughout the year, the demand for lumber has been brisk, though prices have been excessive. At present there are openings for consignments. If any Canadian firm is in position to consign lumber to this market, it would undoubtedly bring a high price, either spruce or white pine, particularly the latter. Ordinary spruce lumber is now selling at $50 per M., and white pine about $55 to $60.

Specifications for U. S. Packing Boxes

Standard specifications for packing boxes for the army have been promulgated by the United States War Department. The specifications go into complete details regarding the kinds, sizes, grades, and thicknesses of lumber to be used, the styles of boxes required, and the number of cleats and nails necessary to give the desired strength. For purposes of manufacture the principal woods used for boxes are classified in four groups, as follows:

Group 1.—White pine, Norway pine, aspen, spruce, Western yellow pine, cottonwood, yellow poplar, balsam fir, chestnut, sugar pine, basswood, cypress, willow, noble fir, magnolia, white fir, buckeye, cedar, redwood, butternut, cucumber, alpine fir, and lodgepole pine.

Group 2. — Southern yellow pine, hemlock, Virginia and Carolina pine, Douglas fir, larch.

Group 3.—White elm, red gum, sycamore, pumpkin ash, black ash, black gum, tupelo, maple, soft or silver.

Group 4 — Hard maple, beech, oak, hackaberry birch, rock elm, and white ash.

The thickness of the lumber to be used in making boxes and the length of the nails is varied according to these lumber groupings, in order that every advantage may be taken of the natural strength of the particular kind of timber used.

Your New Saw Mill

Will give you the best service and the longest service with the least expense for upkeep—If it is a Fisher & Davis Mill.

Catalog of Saw Mills, Edgers, Planers, etc., is yours for the asking. Ask to-day!

FISHER & DAVIS MFG. CO. St. Louis, Mo.

Union Lumber Co.

Limited

White Pine
Red Pine
Spruce
Red and Jack Pine
Lath

Union Lumber Co., Limited

701 Dominion Bank Building
TORONTO, CANADA

—if you buy cheap, low-grade tea you are practicing false economy.

The advantages in favour of *good* tea are

Greater number of cups to the pound.
Real flavour.
Satisfaction instead of dissatisfaction.

"SALADA" TEA

is the finest quality Ceylon and Indian Tea that will yield generously and prove more economical in the long run than any cheap, low-priced tea.

The sealed moisture proof packets facilitate storage, transportation and stock inspection.

Many Lumber Camps and Mines favour us with their patronage for these advantages.

In any case write to us for samples and prices.

SALADA TEA CO.
TORONTO

Review of Current Trade Conditions

Ontario

The car situation still dominates the Ontario Lumber trade. The situation is quite serious, and is holding up the trade in all quarters. Were it not for this there would be an exceptionally good volume of trade. A number of Ontario wholesalers have found it necessary to take their men off the road. The demand in general is far better than the supply, and prices are strong. Wholesalers report that they are taking stock right up to the saw. Good lumber is very scarce and strong in price. Nos. 1 and 2 culls in all lines are in strong demand. Lath are moving very slowly, although spruce lath in the last week or ten days have stiffened up about 15 to 25 cents a thousand.

Stocks of lumber in wholesalers' hands are much depleted. Probably the average holdings of wholesalers to-day would not amount to more than 50 per cent. of those of a year ago. Retailers' stocks are probably only about 25 per cent. of what they were at this time last year. Most of the trade to-day is with munition plants. There is no building trade worth mentioning.

The export demand from Great Britain is good, but it is almost impossible to make shipment across the Atlantic. The trade with the United States is good. but would be much better if it were not for the scarcity of foreign freight cars. Most of the stock going to the United States is for government business. There is a fair trade with the West Indies and South America, but the catastrophe at Hailfax will hurt this trade for a time, as Halifax was the only available port for shipments to these markets. It is almost impossible to get into New York, Boston, or Philadelphia for shipments to South America or the West Indies, as the railroad embargoes are preventing shipments. It is possible that arrangements will be made by some of the shipping companies to use the port of Portland, Me., for this purpose.

A tendency towards higher prices is reported from Ottawa, several lines having advanced from $1 to $4 per thousand, early in December. Retail trade at Ottawa is fairly good and somewhat more active than it was a year ago. All the Ottawa district sawmills have closed for the season. The transportation difficulties continue, it being almost impossible to obtain cars for shipment to the United States. New orders for powder boxes have been issued by the Imperial Munitions Board. These are the first orders of this nature since last spring. It is reported that woods operators who come in class A under the Military Service Act are to be given exemption for a period of three months.

Eastern Canada

The beginning of the winter season finds most of the mills in New Brunswick with a fairly large quantity of stock on hand, most of which has been sold but not delivered. Many of the large mills which sold to the British Admiralty have piled their stock back from the regular piling grounds, and so will not be handicapped by want of piling space for next year's new stock. The Admiralty, however, are making good progress in removing stocks which they have purchased, and it is not likely that there will be much of this class of goods left at the mills at the end of the winter. New Brunswick manufacturers are still doing only a very light trade with the United States, on account of the difficulty in obtaining cars. Canadian railways are not permitting their cars to carry lumber across the line, and United States railways are refusing to send their cars into Canada, so that the rail shipments to the United States have been greatly reduced. The absence of vessels for coasting trade has been an additional factor in the decrease of trade with the United States. Woods operations in New Brunswick this year will be considerably below normal. The larger mills are only taking out about one-half of a normal cut. Some of the large mills and many of the small ones are taking out nothing at all.

The local trade at Montreal is very quiet. There is a fair volume of orders from the United States, particularly for shell box lumber, but the great scarcity of cars is hampering the shipment of stock for this trade. Orders for shipbuilding timbers are very quiet, nearly all of the stock of this type required at present having already been ordered. The export season to the United Kingdom has come to a close, and the year's total was in the neighborhood of 20,000,000 feet, which is only about 20 per cent. of the total for 1916.

The spruce market at Boston continues firm and prices are strong. The demand is good in nearly all lines, and stocks are decreasing. The price of frames is very firm, but the demand for spruce clapboards is light. Sales of dimension spruce have not been very heavy during the past fortnight. The $40 base on dimension continues steady. Shipments from New Brunswick mills have been a little better, as cars have been more plentiful. There is not much prospect in the way of improvement in housebuilding. Hemlock boards continue firm at Boston. The shingle market is very quiet, and the drop in red cedar extra clears is reported.

Great Britain

The most important matter under discussion among the lumber trade in Great Britain at present continues to be the import situation. Merchants declare that they cannot see how this trade can be carried on under present conditions at a profit to importers, and that, as wood will be brought in either by the government or by private firms there must be some way in which private business should be feasible. At present they are entirely in the dark as to whether the government intends during the coming winter and throughout next season to do all the importing itself and to make its own terms with the foreign shippers or to allow a share of the business to pass through the old channels. If the former conditions prevails the situation will be serious to the trade. If, on the other hand, the comptroller really desires to keep the trade alive, he must see the ruin which is facing the old, established firms. The situation has, indeed, become one of life and death to practically every large and small lumber importing firm in Great Britain.

The trade in softwoods at London continues very slack. There is the usual large quantity of business in government requirements, which are filled to a certain extent from imported stocks, but to a much greater extent from native-grown timber. To counterbalance the deliveries from stock the arrivals have not been at all adequate.

At Liverpool there has been no change of late in the wood markets, and there is practically nothing to report. Shortage of freight space is restraining imports from North America. Until some better arrangement is made by the timber comptroller for an increased and steady supply of hardwoods from the United States and Canada, no relief to the stagnation in trade can be expected. Private trade is still suffering from the lack of supplies and from extensive selling restrictions, and there is no immediate improvement in view. Canadian spruce shippers are reported to be making offers of f.o.b. terms, but the difficulty in obtaining freight space prevents any extensive dealings in future deliveries. It is expected that spruce prices will advance considerably before next spring. Buyers, however, look upon f.o.b. purchases as more or less of a speculative nature under present conditions.

The trade at Manchester is also very quiet. Spot business is light, although there are plenty of enquiries for softwoods. Stocks of spruce are being depleted rapidly, and will probably be cleared up entirely before the end of the year. It is expected that next year will see a marked increase in f.o.b. values, both for spruce and pine deals.

United States

The chief points of interest in connection with United States trade during the past fortnight have been the increasing quantity of government business and a greater volume of ordinary trade than usual. Government control of business is still on the increase, and is likely to continue to increase throughout most of the winter. There is an improvement in the retail trade in districts where good crops have been harvested. In many sections of the United States collections are reported to be satisfactory. There is scarcely a factory anywhere in the country which can be used for the production of war supplies of any description that is not running full force. The market for Southern pine is very active, and orders are being placed considerably in excess of shipments or production. The car shortage is a great drawback in connection with all business that has not to do with the war. Retailers who did not lay in stocks earlier in the year are coming out with a good demand now, and are finding it very difficult to get deliveries. Most of the trade of this nature is from country yards, which report quite an increase in the volume of purchasing by farmers. In the corn-producing section of the country farmers did not appear in the market as early as usual, and then they wanted practically everything that was available for corn cribs and similar uses. There has also been an improvement in the building demand in smaller towns, where yellow pine is the chief line stocked. Great efforts are being made to speed up the output of ship timbers and lumber for other government needs. The car shortage, however, is interfering even with this trade. Railroad companies are resorting to many lines of routing in order to get stocks through to destination. The trade in North Carolina pine is also affected by the shortage. It

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

is easy enough to make sales, but very difficult to make delivery. The greater part of the business reported is on government account, and for this purpose cars are more plentiful than for ordinary trade. The outlook is for shipments considerably in excess of production during December. Government purchases include large quantities of No. 2 and No. 3 flooring, etc.

There is not so much trade in white pine at present as is usual at this time of year. This is the result of a shortage of stock rather than a reduced demand. Stocks in the North and West are far below normal. Even with a car shortage during the winter, it is expected that some grades of white pine will be off the market long before the winter is over. There is a strong trade in choice factory stock and also a good demand for the lower grades. The urgency of the demand for airplane spruce has induced the United States Government to take strong measures to prevent obstruction in the production of spruce logs on the West Coast. Between 8,000 and 10,000 soldiers are being distributed at the camps wherever necessary to take care of any attempted interference with production. The spruce market in the East continues firm, and sales of all grades are easier to make than shipments. The trade in hemlock is light, but stocks in first hands are scarce, and the outlook for heavy production is none too bright. Hemlock prices have been firmer in some districts of late.

The heavy demand for Douglas fir for shipbuilding continues. Railroads and retailers are also giving out good orders. The car situation on the Pacific Coast shows no improvement. Western pine manufacturers are working their plants as fully as possible, trying to get out a heavy cut, rather than to concern themselves about getting orders. A little improvement is reported in the car supply, and all the cars available have been shipped out promptly. Shipments during the past few weeks have been greater than orders.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Ottawa Market Report—Prices Firm

Ottawa, Dec. 10.—(Special to the Canada Lumberman.)—The Ottawa lumber market, during the first ten days of December, remained firm, with a tendency toward higher prices. The market is not overstocked. The local demand, especially for the building grades, has fallen off. Export orders continue to keep up, and in some instances new business is reported. Prices of several grades advanced from one to four dollars per M. during the first seven days of this month.

Retailers believe that this month's business will equal, if it does not surpass, in volume that done during a corresponding period a year ago. The great interest centered in the coming federal election will porbably have its effect on the trade, as it is felt at Ottawa that buyers will postpone orders till after December 17.

All the sawmills in the Ottawa district have closed. The last was that owned by W. C. Edwards & Co., at Rockland, which stopped on December 5. Indications generally point toward an improvement in the woods labor situation. Mr. George H. Millen, head of the E. B. Eddy Company, reports that arrangements have been made with the government, or the Military Service Council, whereby the men of the first draft in the company's employ in the woods are given exemption for three months. Camp supplies already in the woods will thus be used, and the company will be reasonably sure of getting its cut this season.

The transportation situation, which improved in November, is again causing trouble. Shippers complain of having difficulty in securing cars for shipments to the United States. It is now necessary to present a statement that the shipment is a war order and is sanctioned by the American Government.

The Imperial Munitions Board has called for tenders on powder boxes. The tenders were returnable on December 11. Powder boxes have not been made by Ottawa plants since last spring. The demand for this kind of box may result in advancing the present market quotations for mill-run white pine.

Shepard & Morse report a successful sawing season. The sawmill closed on November 25, having operated later than for the last three years. This was due to logs being readily available. There was little or no congestion of logs on the Ottawa River this year. Twenty-five employees of the Shepard & Morse Company at Ottawa are affected by the first draft call. The woods and camp operations are reported to be satisfactory and well under way.

The Hawkesbury Lumber Company reports that conditions in its camps are showing improvement, and are better than those existing last month. No estimate of this season's cut is yet obtainable.

A decrease in local trade is reported by the McAuliffe-Davis Lumber Company. This plant is experiencing difficulty in transporting orders to the American market. Good progress is being made on the shell box orders received some time ago.

Gilmour & Co. state that business has continued good during the latter part of November and up to the date of writing. New orders and American business have been received. The new cut which will come into the market next spring is expected by Gilmour & Co. to bring higher prices..

Mr. Jackson C. Booth reports that the woods operations of John R. Booth are "unsatisfactory." A shortage of woods labor is reported. "Some of the men are shifting from one camp to another all the time," said Mr. Booth. "Perhaps they think it will be harder to keep track of them if they are liable to the Military Service Act," he added. Arrangements for the exemption of the woods employees for a period of three months are under way.

The majority of the hands laid off at the Rockland and Ottawa sawmills will go to the woods.

The order for 128,000 shell boxes, referred to in the last report, has been confirmed. It went to the Estate of James Davidson. In addition to this, a new order for 5,000 Bethlehem boxes has been received. A third order for 300,000 commercial boxes was received early in December. The mill is very busy, operating sometimes at night. The woods operations are going ahead rapidly. One hundred and fifty men are engaged in the bush. It is expected that 100,000 logs will be gotten out by Christmas, and, if the snow does not become too deep, it is intended to increase the cut before the woods season closes.

Local Trade Very Quiet at Montreal

Montreal, Dec. 10.—(Special to the Canada Lumberman.)—As a whole, trade is satisfactory. Local business is very quiet, but orders for United States account are coming in fairly well. A large number of enquiries for shell box lumber by United States firms are being received, and, were the car situation better, a considerable increase in the shipments would be made.

Until further orders for ships are placed, the lull in the demand for British Columbia timber is likely to continue, owing to the closing of contracts for immediate needs. The business in general British Columbia lumber has, however, picked up a little.

Prospects for purely local trade are not good. There are practically no large building contracts in sight, and, according to architects, very few buildings of any size are contemplated for next spring. The chief work for which permits are being issued consists of houses of a little better type than usual. The total of the permits makes poor reading. For November they were valued at $219,355, a decrease of $646,175; while for the eleven months they were $4,299,053, a decline of $706,411. The reduction of building costs by means of co-operation between the supply men is to be discussed, but it is questionable whether this can be done, especially in view of the prospect of still dearer lumber. Efforts are also being made to induce people to build now, and not wait for an anticipated reduction in prices after the war.

The last boat for the United Kingdom has now left, taking a little lumber. Exporters have been engaged in taking stock of the season's shipments, and the amounts are not such as to cause satisfaction. At the moment of writing, the totals are not available, but a rough estimate puts them at about 20,000,000 ft., or a fifth of last year's exports. Most of the lumber was, directly or indirectly, for government account, and consisted mainly of spruce. This, however, does not represent the whole of the exporters' business, as shipments have been made through Boston, Portland, and New York, chiefly of hardwoods.

St. John River Operations in State of Maine

The Bangor, Me., Commercial, says that the log cut on the St. John and Allegash waters during the coming winter will depend very much upon the ability of the various operators to get sufficient labor. Some of the operators have been fortunate enough to obtain somewhere near a full crew with which to yard the logs, while others have been short of men all fall. There are, of course, several well-known reasons for the shortage of woods labor this year in all parts of the state. On the St. John and Allegash waters, and also on the Aroostook River drainage there have been large operations for pulpwood during the past summer. These pulp operations are a new proposition to this

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part of the state, and to carry them on during the summer drew largely from the labor usually employed in the fall and winter logging operations. As the pulpwood operations have been brought to a close the labor situation has improved. Information obtained from those directly interested in the logging operations in Northern Maine indicate a somewhat larger cut during this winter than was obtained last year. The following estimates are made by one who is closely in touch with conditions, and are based upon the present forces employed.

On the St. John River waters Charles E. Jones, of St. Francis, Maine, cutting on the Little Black Waters, will get four million feet of logs. Mr. Jones' spruce, fir, and pine logs go to the St. John Lumber Company at Van Buren, Me. He manufactures his cedar at his St. Francis mill.

Randolph & Baker, Ltd., of St. John, N.B., will cut from four to five million feet, and will drive the logs to their mills at St. John, N.B.

Ward & Bradbury, Inc., of Fort Kent, will cut 3,000,000 feet of logs on the St. Francis and St. John Rivers, and will drive the logs to its mill at St. Francis for manufacture. This company also cuts several million feet each year in Canada and hauls the logs into Maine for manufacture.

Murray & Gregory, Ltd., of St. John, N.B., plan on cutting 4,000,000 feet on Chimenticook Stream and driving the logs to their mill at St. John, N.B. This is the first season that this company has cut logs in Maine for many years. Its operations have been confined to Canadian lands.

The St. John Lumber Company, with mills at Van Buren, is cutting 5,000.000 feet on the St. Francis River. This company will also have operations of some 10,000,000 feet on the main St. John River, and about 10,000,000 feet on the Allegash River.

Arthur I. Noble, of Fredericton, N.B.; W. N. Cunliffe's Sons, of Fort Kent, Me., and Albert M. Currier, of Seven Islands, Me., are operators for the Stetson, Cutler Company, with mills at St. John, N.B. Mr. Noble cut 7,000,000 feet on the main St. John River. Mr. Currier will cut 5,000,000 feet on the same river.

The Messrs. Cunliffe will cut 10,000.000 feet or more on the Allegash River waters.

John A. Morrison, of Fredericton, N.B., is cutting on the extreme Upper St. John River waters, and plans to obtain some 5,000,000 feet.

B. C. Howard & Co., Inc., a Canadian concern, with mills at Lac Frontiere, is cutting 3,000,000 feet of logs on the American side and hauling them directly to its mills for manufacture. The lumber is shipped out over the Quebec Central Railroad.

On the Allegash River lands during the past seasons the American Realty Company, a new concern to that section, has cut pulpwood to an amount estimated at 40,000 cords. This wood is peeled and cut into four-foot lengths, and will be driven down the Allegash River to the St. John River and thence to St. John, Me., where it will be taken out of the water and shipped by the Bangor and Aroostook Railroad by the company's several mills in this state. This company has begun extensive operations in Northern Maine during the past year, and in the future bids fair to be a promising factor in the lumbering interests in that section of the state.

On the Fish River waters the Fish River Manufacturing Company, with mill at Eagle Lake, will make its usual cut of 10,000,000 to 12,000,000 feet.

The Fort Kent Mill Company, with mill at Fort Kent, will cut 3,000,000 feet.

J. A. Laliberte, with mill at Wallagrass, is cutting 2,000,000 feet. Mr. Laliberte makes a specialty of shingles.

On the upper waters of the Fish River the Portage Lake Mill Company, with mill at Portage, is cutting its usual amount of from 12,000,000 to 15,000,000 feet.

The Ashland Company, with mill at Sheridan, is cutting 4,000,000 feet on the Machias waters and 8,000,000 feet on the Aroostook waters.

In addition to the logging operations on the Aroostook the Orono Pulp and Paper Company has cut during the past season several thousand cords of peeled wood, to be shipped this winter over the B. and A. Railroad to its mill at Orono.

Eastern Canada Manufacturing Situation

A Canadian correspondent, writing to the New York Lumber Trade Journal about business conditions in Eastern Canada, says:

"Things have worked out very much in line with expectations, with the result that to-day we have little dry lumber to offer; further, we might say that last spring's prices have been well maintained throughout the season, sometimes with a possibility of getting a higher figure in certain sections that we ship to, but regret to mention that the grades in lath from this section shipped to the United States have been severely criticized during the past couple of months by the purchasers on your side. These people generally inspected the quality with a magnifying glass called 'a drop in price.'

"With regard to the prospective condition, this would be very difficult to outline, but, judging by present appearances, we would conclude that a great deal of difficulty would be experienced by manufacturers this winter if they tried to get out the same quantity of logs as was done last year. Of course, conditions may improve within a few months, but there is nothing to warrant this view at the present time. For instance, the contracts which have been already given for log-making, delivery to be made generally on river banks, in some cases many miles away from the mills, have been let out at a marked advance in price as compared with last year. Then, again, if we were obliged to pay a proportionate increase on labor next spring as was done this year, it would certainly not only raise the price on sawn lumber, but it is actually possible that it would prevent smaller concerns from being able to operate next year, for the reason that it may prove impossible for them to get the necessary money to complete their sawing season, hence some of them wouldn't dare start if unable to finish, especially in view of the scarcity of cars, this being a means of preventing them from turning their lumber into money soon enough. This condition re cars would be serious to the operator if ships continue to be unavailable.

"In regard to ourselves, we might say that we have seen fit not to dispose of most of our 1917 cut because we don't believe it interesting to any buyer to sell him green stock, and, further, not deliver it as promptly as he wants it. Then, again, so long as the war lasts labor will become more scarce with us, and, therefore, the whole idea of volume in feet must be forgotten, because it can't be very well delivered by everybody, so that we have kept a few million feet of nicely assorted widths, thickness, and qualities of lumber put up in good shape and well covered so as to leave the stock as free from snow as possible. All this we have done for our regular customers, to whom we are very grateful, and for whom we have acted accordingly, and we know that our customers appreciate how advantageous our position is toward them.

"Therefore, with what will likely be manufactured next year, plus what we have kept from 1917 cut, we shall be in a better position than if we had sold more of our lumber and not been supplied with the necessary rolling stock to deliver it, although we must not convey to the trade that we are not shipping; contrary to this, we are pleased to say that at our St. Maurice River point of loading we have very few back orders as compared with sections like the Ottawa Valley and certain districts in New Brunswick."

Hardwood Markets in the United States

The Hardwood Manufacturers' Association of the United States, in its latest market letter, says: There has been a noticeable improvement in the hardwood market during the last two or three weeks. Enquiries are more numerous and prices are steady, with a tendency toward higher levels, this being due, in part, to the many embargoes and car shortage. The hardwood lumber industry is beginning to realize that the country is on a "war basis," and that the time is approaching rapidly when only lumber actually needed for war purposes will be permitted to move. Manufacturing operations are having to be curtaled throughout the hardwood territory because of the labor shortage and the scarcity of cars for handling logs, and stocks are in nearly every case below normal. The demand for government purposes shows no let-up. The increased call for the thicker stocks has materially reduced the production of one-inch lumber, and large consumers, realizing this fact, are endeavoring to get cover on requirements to carry them for some time. Whatever changes have taken place in the lumber trade situation during the last month are in the direction of greater concentration of the business in the hands of the government, or, to put it differently, the government requirements are getting to be more and more the chief reliance of the lumbermen.

Oak, ash, and hickory suitable for the manufacture of the various implements of war are in great demand. Hickory especially is needed in large requirements by the government, but stocks are low. Plain oak in stock thicker than 4/4 is in excellent call, and it is difficult to supply the demand. As a matter of fact, the only items dragging just now are those ordinarily in demand from the furniture trade and for building purposes. If signs can be interpreted correctly, very little furniture will be manufactured until after the war.

Building permits for the month of October showed a loss of 40.5 per cent. as compared with the corresponding month a year ago. In New York City the loss was 70.6 per cent. Money continues in good demand, and is firm, with rates unchanged at 5½ to 6 per cent. for all classes of loans. Business failures in October, both in number and amount, were less than during any corresponding month since 1906. Bank clearings for October show an increase of 9.9 per cent. over the same month last year, and of 39.2 per cent. over the same month in 1915.

The corn crop of 1917 is more than 66,000,000 bushels larger than ever grown in the history of American agriculture. Heavy killing frost, widely scattered, caused an unusual deterioration in the condition of cotton. Reports seem to indicate a complete loss of the top

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crop, and it is now stated that the yield will fall below 11,000,000 bales, excluding linters.

As to future prospects, although war preparations are stimulating us into a period of great business activity, there are many reasons to believe that general business has now reached dangerous levels. Of course, with the war stimulation it is probable that the volume of business may persist for months. In accordance with the law of equal and opposite reaction, a period of depression will, of course, eventually appear. This reaction may be precipitated at any time by the ending of the war. Hence the thing to do is to be cautious about long-term obligations, commodity purchases, and extensions.

The Care of Saws

Whatever the nature of the business considered, the prime essentials for success are practical experience and adequate equipment. The former can be acquired in time by patient study of the subject, greater and quicker progress being gained by a knowledge of the general experience of others, backed by personal experiment and practice; while the latter may be purchased from manufacturers of tools and machinery, whose particular duty and aim is ever to improve their own product.

Lack of proper equipment and facilities, however, is a great handicap, no matter how skilled or able a man may be. This applies with especial force to the filing room.

With these facts in mind, and also considering the diversity of opinion and methods, often controlled by individual ideas and theory, in writing this article on the "Care of Saws," the information and instructions here given are based on actual working conditions, and are the result of long, practical experience.

Conditions, of course, vary, and it is impossible to lay down hard and fast rules covering every contingency. Nevertheless, these instructions are fundamental and applicable, with modification, according to the circumstances.

Though the many large sawmills have up-to-date and completely-equipped filing rooms and expert filers, it is surprising to note the number of medium-size and small mills that lack even the most necessary appliances for refitting their saws.

No matter how small the mill and output, it would be found advantageous to have a man connected with the mill who has a good understanding of repairing and fitting saws, and where the production approximates 15,000 feet daily, or 10,000 feet for a saw and planing mill, the employment of a good filer with proper equipment certainly pays, especially if his duties include those of mill foreman.

In any event, every saw and knife must be resharpened and given attention from time to time, whether the work be done at the mill or by an outside filer.

In the case of sending them outside for repairs, then it is a safe guess the saws and knives will be kept at work on the mill until they are so dull they will not cut freely, which is the principal cause of breakage. Little or no consideration is given to the liability of the dull saw cracking, nor the lessened output, or poor quality of product which is the inevitable result. The operators' chief idea, seemingly, is that of keeping the saw running until it can't go any longer.

It must be remembered that the life and efficiency of the saws depend as much on the accuracy of the setting and sharpening as upon the quality of the material and temper in them. Further, all working parts of the machine should be in true alignment, all bearing well babbitted, properly adjusted and lubricated.

A little thought and figuring will show that running dull tools is extremely costly, for the summing up must include the loss in production, the difference in value of the poorly manufactured lumber, the extra waste, the forcing of the saw or knife racking the mill or machine, lessening its term of life or causing breakage, and then eventually a greater expense for refitting the saw or knife, which must be done sooner or later.

On the other hand, given a well-equipped filing room in connection with the mill, and a capable filer, it is an easy matter to maintain the saws and knives in such excellent condition that the mill is kept continuously running and giving the maximum output of well-manufactured lumber. This satisfactory state of affairs can be attained only by exercising due care and promptly refitting the saws and knives at the first sign of becoming dull.

Less work is required to resharpen a half-dulled saw twice than a very dull saw once, and if resharpened when only half dull the saw is continuously nearer the 100 per cent. efficiency mark as to fitting and results.

It cannot be too strongly urged that saws and knives, as well as any other cutting implement, must be kept sharp to do good work. Not only do they cut to better advantage, but the work of refitting, if done at the proper stage, tends to promote the life and efficiency of the entire outfit—the men included.

To those employed in a sawmill the scene is so familiar that it

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It relieves the main saw of a great deal of work, leaving it free to perform its proper function of cutting up logs; and when the log is disposed of, the edging is also done.

It makes more merchantable lumber per log.

It wastes the minimum quantity of material, saving considerable No. 1 lumber that is lost when the edging is done with the main saw.

It raises the grade of the lumber, removing hearts, shakes, and knots, making firsts and seconds out of commons, and so cutting up every board as to make it as valuable as possible. For example, a board that will grade as No. 2 may be ripped so that one piece goes into the No. 1's and the other into the No. 2's.

It gives the boards straight and parallel edges.

It makes them of standard or any desired special widths, and automatically cuts them scant, exact, or plump, as desired.

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6 x 6/16 "	5	"
7 x 6/16 "	4	"
8 x 6/16 "	8	"
9/11 x 6/16 "	2	"
1 x 4 in. and up 6/16 Mill Cull	5	Cars.
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apparently lacks in significance, yet the swiftly revolving, keen-toothed circular saws entering the huge logs as though no obstruction whatever stood in their way, zip! and a section is cut off with ease and celerity; the quick motions of the men and the working of the various machines in converting the logs into staves and heading in the modern cooperage mill, all form a curious and wonderfully interesting sight to the visitor.

First we see the great quantity of logs on the mill pond or skid-way; then, glancing along, we see them, one after another, in continuous procession, taken up the incline, by means of a conveyor chain. Reaching the mill deck, the log is "kicked" off the haul-up chain by a steam appliance known in sawmills as a "kicker" or loader. Sideways the log falls on the conveyor chain or "hedgehog," and is fed under the drop saw.

In the cooperage mill there is a scene of intense action. The drop sawyer apparently acting as though stepping on hot stones, hops on a foot lever, then on another, at the same time pulling a lever on the right, next shoving one on the left, in the endeavor to keep the log in continuous motion; down drops the swiftly revolving 72-inch circular saw, cutting off in few seconds a 20-inch or 30-inch section of the big log; forward goes the log, pushing along the section; a kick of the foot brings up the "stop," which quickly kicks up the cut section; and while in mid-air, as it were, it is grasped by a man with pike and hook and, without pause, is rolled or bounced to either the bolters or the heading machines, which is determined by the length of the section.

The bolting operator grabs the section of log with a hook, places it on the carriage of the bolter, a quick acting short-log sawmill, and here again is a swiftly revolving 60-inch circular saw, which first splits the short log in half, then in quarters, sixths, or eighths, as required. These are called "bolts."

The shorter section is passed to the sawyer operating the heading saw, where the stock is reduced to suitable thickness of board for slack barrel heads. This is usually accomplished by a horizontal or a pendulous carriage machine. With the latter the section of log is placed on the carriage, which is swung by hand-feed toward the saw and a board is rapidly cut off, then the carriage swinging back again, the stock is moved into position for another cut, and so on until the stock is entirely cut up. This machine is capable of making twenty or more cuts a minute.

Some understanding of the push and activity on this work may be had from the fact that the bolting and heading sawyers are trying to keep up with the drop sawyer, and the latter always endeavoring to get ahead of the former; and as it takes but a few seconds to cut off a section of log, that neither falls far behind, shows they are going some.

While for general sawing 10,000 feet rim speed per minute of a large saw is considered the maximum, in a cooperage mill the conditions are different and the duty required of the saw extremely difficult, for here the speed is high, the action fast, and the lumber hard; the saws being subjected to a severe shock every time they start a cut—the large saws making as many as six to ten cuts per minute through a log.

Bearing on the matter of speed, in some cooperage mills the drop saws 60 inches or larger in diameter, are run at about 700 revolutions per minute; the 56-inch heading saws at 1,300 revolutions per minute; the "lay down" bolter saws at 750 revolutions per minute, and the upright bolters at 850 revolutions per minute, while the stave choppers are making 160 cuts per minute. In referring to this, however, it must not be construed that we advocate such excessive speed of saws.

Under these circumstances, therefore, it naturally follows that it is absolutely necessary to have the saws "put up" and continuously maintained in the best possible condition for highest results and longest life.—The Disston Crucible.

Quebec's Forest Protection Praised

In the speech from the throne at the opening of the Quebec Legislature, reference was made to the excellent system of forest protection in the province. It says: "The effective protection of our forests against fire and the improvement of the means at our disposal for that purpose are matters of wise administration. Tanks have been provided for the new associations recently formed with the concurrence of the Department of Lands and Forests; an important portion of the forests within the timber limits is already under most efficient supervision, and there is reason to hope that in the near future this system will be in force throughout our entire forest domain." It is also stated that good results have been obtained from the nursery of forest trees at Berthier, P.Q. During the present year alone half a million young trees have been distributed, most of which have been planted in regions swept by fire and unfit for cultivation. Ministers intend to encourage still further the reforestation of Quebec lands.

The first wooden merchant vessel of the United States Government fleet has been launched at a Pacific port. The ship is of 4,000 tons dead weight, 290 feet over all, and was built in 120 days.

All Wool MACKINAWS

Plain and Fancy Patterned

THE MACKINAW "WIND BREAK" or SWEATER (as shown in accompanying illustration) has all the advantages of a Sweater and Jumper combined. Heavy felted to break wind. Absolutely all pure wool. Knit wool sweater cuffs. Adjustable collar to be worn open or closed. Two pockets, grey, red or brown with black check.

Write for Samples and Prices

Smart-Woods LIMITED

Ottawa - Montreal - Toronto - Winnipeg

JENCKES LOG HAULER

The engraving shown in this advertisement is made from a photograph of the Log Hauler recently furnished the Davison Lumber Company, taken as it was being tested out in our yards.

This type of Log Hauler is coming into use.

Quotations and particulars on application.

The Jenckes Machine Co., Limited

SHERBROOKE MONTREAL 908 E.T. Bank Bldg. COBALT TORONTO 710 C.P.R. Bldg. ST. CATHARINES VANCOUVER 616 Standard Bank Bldg.

Works: SHERBROOKE, QUE.; ST. CATHARINES, ONT.

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Dressing Mills at
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MERRY CHRISTMAS

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C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber, Lath and Shingles
Offices—McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

The Standard Chemical Company recently sustained a serious loss by fire to their chemical plant at Sault Ste. Marie, Ont.

Chew Bros., Midland, Ont., have closed their mill for the season and contemplate remodelling and enlarging their lumber mill.

The Kinleith Paper Company, Welland Canal, St. Catharines, Ont., are about to start work on repairs to cost $5,000, to their paper mill which was recently destroyed by fire.

Samuel S. Lambert, Welland, Ont., reports that he has put in a camp in the township of Sweeney, Ont., and will take out three million feet of the timber which he recently purchased from the Ontario Government. He is arranging to put in a mill to saw the lumber.

The Toronto Shipbuilding Company, Limited, have completed the framing on one of the wooden vessels they are building for the Imperial Munitions Board and have made good progress in connection with the framing of the second vessel. The first vessel is now being planked in.

The Goderich Manufacturing Company, Ltd., Goderich, Ont., who recently suffered a loss by fire, report that they intend to rebuild as soon as weather is favorable next spring. They will put up a two-storey reinforced concrete building, 110 x 204 feet, and intend to make it as nearly fireproof as possible.

The Ottawa Paper Box Company, Limited, has been incorporated with head office at Ottawa, Ont., and capital stock of $150,000, to carry on business as merchants, manufacturers and dealers in paper, pulp, wood and lumber of all kinds. Among those interested are A. C. Fleming, W. S. Mackenzie and J. E. McVeigh.

The Colonial Lumber Company have purchased the Petawawa Lumber Company's mill and are dismantling it and rebuilding the mill recently destroyed by fire. The new mill, machinery, etc., are being supplied by the Waterous Engine Works Company, Brantford, Ont. The work on the mill will be done by day labor.

The Dominion Lumber and Coal Company, Limited, has been incorporated with head office at 265 King Street East, Hamilton, Ont., and authorized capital of $40,000. The officers of the company are W. S. Stout, of Toronto, Herbert Brennen and E. S. Smith, of Hamilton. Mr. W. S. Stout is president and general manager of the Dominion Express Company of Canada, and Messrs. Brennen and Smith are lumbermen who are well known to the trade.

Eastern Canada

The St. Lawrence Lumber Company, Quebec, P.Q., has been registered.

A report from Amherst, N.S., states that the International Engineering Works have received extensive new orders for shells and that their plant has been put into operation once more, running with three 8-hour shifts.

The Three Rivers Box Company, Three Rivers, P.Q., who are erecting a box factory to cost $60,000, have not purchased the machinery for the manufacture of wooden pail handles and would like quotations on same. Correspondence should be addressed to the company, care of N. E. Clement, Three Rivers, P.Q.

The Smith Lumber Company, Woodstock, N.B., expect to put in about 3,000,000 feet of logs this season. They are operating two camps, one in Northampton and one in Wilmot Parish. They expect to open their mill about February 1st. The company have taken over the cooperage plant at Woodstock and are installing machinery for barrel production.

Western Canada

The Graham Island Spruce and Cedar Company, Prince Rupert, B.C., are preparing plans for the erection of a sawmill, wharf, etc., at Port Clements, B.C. (Queenstown Harbor).

The planing mill belonging to Wilker & Son, Berge Street, Rosthern, Sask., was recently completely destroyed by fire. The owners are contemplating rebuilding, and will probably require machinery and engines. There was no insurance.

The Century Logging & Lumber Company, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $10,000, to carry on business as loggers, foresters, timber merchants, sawmill and planing mill proprietors, and to manufacture and deal in wood pulp, etc.

The Hardwood Lumber Company, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $15,000, to carry on business as manufacturers of and dealers in all kinds of hardwood, lumber and timber, and as loggers, timber and lumber merchants, sawmill and shingle proprietors.

The Wm. Lyall Ship Yards, North Vancouver, B.C., which has a contract for six standard steamers for the Imperial Munitions Board, has laid the keels for the fourth and fifth of its vessels. The four vessels are in an advanced

stage of construction and the company report that labor is plentiful. There are about 750 men on the company's payroll at present.

Sealed tenders are being received by the Minister of Lands for British Columbia, until the 24th day of December, 1917, for the purchase of License X1163, to cut 4,160,000 feet of larch, cedar, fir and hemlock, and 650 cedar poles, situated on Cork Creek, near Creston, Kootenay District. Two years will be allowed for the removal of the timber. Further particulars may be obtained from the Chief Forester, Victoria, B.C.

The New Westminster Construction and Engineering Company, Limited, New Westminster, B.C., which is building four wooden standard steamers at its Poplar Island yard for the Imperial Munitions Board counts upon being ready to launch the first vessel on February 1st, the date scheduled. The work is progressing satisfactorily and planking is now under way. The company's second vessel is about ten days behind the first and its third vessel is nor far behind the second one. The keel of the fourth vessel has been laid. About 400 men are engaged in the yard.

Harris Abattoir Company's Oleomargarine Output

The Harris Abattoir Company, Ltd., Toronto, who are making an announcement in regard to their oleomargarine elsewhere in this issue, invited a representative of the Canada Lumberman to visit their plant recently and see the process of manufacture. The visit was an extremely interesting one. The process was shown and explained from start to finish. In the first place, the company use certified milk with which to start the culture. Ordinary milk is next used, in the proportion of about 50 gallons to each thousand pounds of oleomargarine to be produced. These are put through various clarifying processes until they are ready to be weighed upon the scales and to be mixed with the oils and fats that make up the balance of the product. The oils and the fats used are varied, sometimes being neutral lard, cocoanut oil, or cottonseed oil. Along with these is mixed a certain proportion of butter. At this stage the product is weighed out, and this is run to a vat filled with water, in which it is agitated mechanically until it forms into "crystals." In this stage it is taken out with specially designed forks, and placed in large boxes, where it stands for a specified period of time, when it is taken to a department, where it is mixed with a proportion of creamery butter and the whole is put into a churn, where some of the excess liquid is worked off. The finished product is then ready for packing and delivery.

The oleomargarine manufactured by the Harris Abattoir Company, Ltd., is a very palatable product, as the representative of the Canada Lumberman can testify from experience. Its keeping qualities, the company states, are better than those of butter, and they also claim that its nutritive value is fully equal to that of butter if not greater. There is one peculiarity of oleomargine to which the company draw attention, which, while not reducing its value, may be thought by some who are not acquainted with the facts to be an indication of deterioration. This is the fact that when kept in the cold it has a tendency to bleach. This characteristic, however, is one of appearance, and does not affect either the taste or the food value of the product.

Forestry Association Issuing Animal Guide

An "Animal Guide" to the North American wild animals, written by Charles K. Reed and illustrated in colors by Harry F. Harvey, is being distributed by the Canadian Forestry Association. This interesting book, which is attractively published and substantially bound in leather, can be had from the association at the price of one dollar. We feel sure that a great many readers of the Canada Lumberman will be specially interested in this book. The information it contains is of exceptional value to all who are interested in wild life. Practically every important animal known to North America is described, and the color illustrations give an exact impression of the appearance of the animal in its native haunts. Not only do the descriptions include the ordinary characteristic appearance of the animals, but tell of their many interesting habits, so that one cannot fail to obtain a practical working knowledge of the methods of life and the appearance of each animal described.

Readers of the Canada Lumberman who are interested can obtain copies of this splendid little book, which is published in pocket edition size, by addressing the secretary of the Canadian Forestry Association, Ottawa

Canadian Paper Exports

Imports of printing paper for books and newspapers into the United States from Canada during September amounted to 91,270,081 pounds, valued at $2,572,768. Total imports of printing paper for books, etc., for September were 97,221,051 pounds, valued at $2,752,777;; imports of wrapping paper, 740,650 pounds, valued at $46,343; imports of wood pulp for September, 43,586 tons, valued at $2,735,018.

WHOLESALE LUMBER

1917 SAWING

1	x 3 in., 6 ft. and up	Merchantable Spruce		45 M
1	x 4 in.	"	"	350 M
1	x 5 in.	"	"	150 M
1	x 6 in.	"	"	45 M
1¼	x 4 in.	"	"	45 M
1¼	x 5 in.	"	"	105 M
1¼	x 6 in.	"	"	62 M
1¼	x 7 in.	"	"	30 M
2 in. Scant by 5 in., 6 ft. and up		"	"	480 M
" "	6 in.	"	"	650 M
" "	7 in.	"	"	525 M
" "	8 in.	"	"	300 M
" "	9 in.	"	"	150 M
" "	10 in.	"	"	75 M

THE McLENNAN LUMBER CO., LIMITED
MONTREAL, QUE.

LOUISIANA RED CYPRESS

QUARTERED OAK PLAIN OAK
POPLAR ASH

Yards at—Nashville, Tenn. Basic, Va. *Mills at*—Sumter, S.C. Winchester, Idaho

We can ship you promptly any of the above Stock, Carefully Inspected

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Prompt shipment. Satisfactory stock. Good service Write for Prices.
A. F. B. AUSTIN, Manager

Install a "By-Pass" Exhauster
in your Saw Mill, Planing Mill or Plant

Our "By-Pass" Exhaust systems save your power and give better service. They handle green sawdust or wet, stringy material that usually clogs up an ordinary Blower system. The fan wheel is not overhung. No heating, clogging, or shaking. Three bearings.

Write for information.

We manufacture and install systems complete.

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PRATT & WHITNEY CO.

OF CANADA, LIMITED

SMALL TOOLS

Taps — Dies — Reamers — Cutters — Drills

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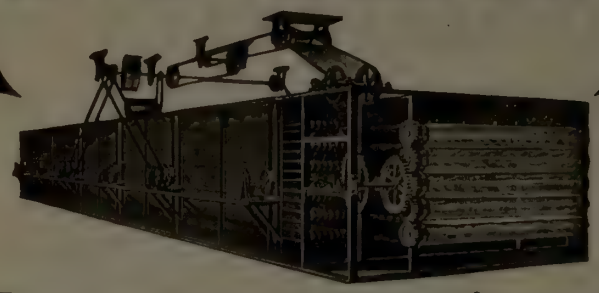

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Morgan Machine Company

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Box Board Matchers,

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Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

Morgan Machine Company

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Hydraulic and Belt Driven

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When sending enquiries state

Pressing Surface required—
Pressure required on material—
Height of Pile you wish to press.

Full specifications and prices promptly submitted

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Original "Dunbar" Machines

We are the original and the only makers of "Dunbar" Shingle Machines, Lath Machines, Clapboard Machines, Steam and Gasoline Logging Engines. Each is the best for its particular work. Are you using the best?

Lath Machine

From our many years of experience we evolved this "Dunbar" Original Lath Machine. Every improvement that could be suggested, every time-tested idea for the betterment of product and for greater speed, has been incorporated in this machine. We believe it has no equal, and there are a great number of mill men throughout Canada who share this belief with us. Carefully constructed of high grade materials and designed to work steadily under the hardest conditions.

Steam and Gasoline Logging Engines

Conditions in Canada necessitate an engine that will stand any amount of strain and hard work in the lumber industry. With this idea in mind we have brought out the "Dunbar" engines perhaps a little stronger than is really needed. They do their work easily and willingly, and stand a great amount of hard usage. Built entirely in Canada for the Canadian lumber trade.

Clapboard Machine

You will need no excuse for the quality of your product if you use the original "Dunbar" Clapboard Machine. Expert in every detail. This machine will give you the very best service under most trying conditions. It will turn out work without delays. It will need practically no repairs and will increase your output. We cannot recommend it too highly because it is giving this very service to lumbermen in all parts of this country.

Send for catalogues of any or all of these machines.

Dunbar Engine & Foundry Co.

WOODSTOCK, N.B.

Lumber Dealer's Experience

The very best evidence we can offer of what a "Little Giant" Motor Truck will do for you is in the experience of lumber dealers and lumbermen who are now using them. Here's one taken at random: "We use a Little Giant one-ton truck, which has been giving us exceptionally good service. While its guaranteed capacity is only one ton, it is very strongly built, and we carry nearer two tons than one a good share of the time, although we do not aim to use it for heavy hauling."—Foster Lumber and Coal Company, Valparaiso, Indiana. This is an extract from their letter, but it is sufficient to give you their satisfied viewpoint.

The "Little Giant" Motor Truck

is standardized. Every essential part of machinery is good from start to finish. We can show you a saving in money over horse-drawn trucking that will be almost unbelievable without the actual proof. Little Giant Trucks are so tool-proof your men can take hold immediately and get real service from them. Write for literature and information.

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IN PLACE OF MEN

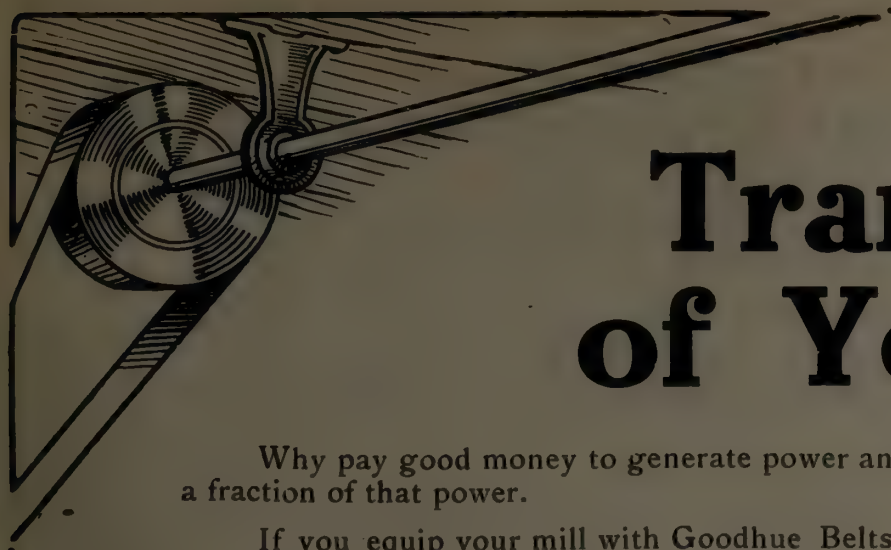
After the tree is cut down, then comes the expensive process of getting the logs to the mill.
Much of this expense can be saved, and at the same time the work done easier and quicker by the use of Marsh & Henthorn

Hauling or Skidding Engines and Loading Engines

We make the right size and style Engine for your camp, whether your output is large or small

Our booklet "Suggestions to Lumbermen," describes many expense saving methods of handling logs with inexpensive outfits. If you have not received your copy yet, drop us a card
Our experts are at your service also. Let us help you to save money in getting out your season's cut

MARSH & HENTHORN, Limited, BELLEVILLE, Ont.



Transmit 100% of Your Power

Why pay good money to generate power and then employ a poor belt that will only transmit a fraction of that power.

If you equip your mill with Goodhue Belts you can transmit 100% of the power generated.

Goodhue Belts stretch 15% to 25% less than other belts and have just the right amount of "cling" on the pulley.

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"Compressed air is used in boring all timbers and driving ship spikes. A Little Tugger Hoist is used in placing timbers."

"Two shifts of carpenters are employed, the night shift working by electric light. . . . . About 500,000 ft. B.M. of timber will have been used."

"In spite of the scarcity of supplies, the construction engineer, believes the mill will be completed by November 1st." "Mining and Scientific Press."

"CC-15" Drift Bolt Driver fitted with cross handle for down driving. This tool arranged with telescopic air feed, extension leg, was shown in last issue.

The use of pneumatic tools on construction work has come to stay. Labor is scarce and early production is required from every plant in course of erection in this country. The "Pneumatic Way" has proved to be the best for rapid work at minimum expense.

The "Little David" Wood Borer and the Little Tugger Hoist will be shown in later issues. Watch for them.

Write for information on "Little David" Pneumatic Tools, Air Compressors, and all equipment necessary to do your work the "Pneumatic Way"

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TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better..	53 00	55 00
1½ inch No. 1 cuts and better.	65 00	67 00
2-in. No. 1 cuts and better	67 00	69 00
1½-in. No. 2 C. & B.	53 00	55 00
2-in. No. 2 cuts and better	55 00	57 00
4/4 No. 2 and 3 cuts		36 00
5/4 and 6/4 No. 2 and 3 cuts	45 00	47 00
8/4 No. 2 and 3 cuts	47 00	49 00
1-in. Good Shorts		48 00
1 x 4 and 5 com. and dressing	39 00	40 00
1 x 6 common and dressing ...	42 00	43 00
1 x 8 common and dressing ...	43 00	44 00
1 x 10 common and dressing ...	47 00	49 00
1 x 12 common and dressing ...	49 00	51 00
1 x 10 and 12 mill cull stocks	35 00	37 00
1-in. mill cull sidings	30 00	32 00
5/4 and 6/4 x 4 m.r., m.c. out.	40 00	42 00
5/4 and 6/4 x 5 m.r., m.c. out.	40 00	42 00
5/4 and 6/4 x 6 m.r., m.c. out.	41 00	43 00
5/4 and 6/4 x 8 m.r., m.c. out.	41 00	43 00
5/4 and 6/4 x 10 m.r., m.c. out.	48 00	50 00
5/4 and 6/4 x 12 m.r., m.c. out.	49 00	51 00
2 x 10 common	40 00	42 00
2 and 3 x 12 common	42 00	44 00
1 x 8 inch box and common..	36 00	38 00
1 x 10 inch box and common..	38 00	40 00
1 x 12 inch box and common.	39 00	41 00
1-in. mill run sidings	40 00	42 00
1-in. mill run shorts	33 00	35 00
1-in. mill run Norway	33 00	34 00
2-in. mill run Norway	35 00	37 00
Norway, c. and cf. 1-in.	43 00	45 00
Norway, c. and cf. 1½-in. ...	44 00	46 00
Norway, c. and cf. 2-in.	44 00	46 00
Spruce mill run 1-in. and 2-in.	35 00	37 00
Spruce mill culls	29 00	31 00

Hemlock, No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ..		27 00
1 x 6-in. x 9 to 16 ft.	30 00	31 00
1 x 8-in. x 9 to 16 ft.	32 00	33 00
1 x 10 and 12 in. x 9 to 16 ft.	32 00	33 00
1 x 7, 9 and 11 in. x 9 to 16 ft.	30 00	31 00
1 in. No. 2, 6-ft. to 16-ft.	24 00	25 00
2 x 4 to 12, 10 and 16 ft.	30 00	31 00
2 x 4 to 12 ft., 12 and 14 ft. ..	30 00	31 00
2 x 4 to 12 in., 18 ft.	32 00	33 00
2 x 4 to 12 in., 20 ft.	33 00	34 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	24 00	25 00
Clear in. B.C. cedar, kiln dried	50 00	55 00

Douglas Fir:	
Dimension Timber up to 32 feet:	
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	46 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16	47 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.	47 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.	50 00
10x20, 18x20, up to 32 ft.	57 00
6x18, 8x18, up to 32 ft.	52 00
6x20, 8x20, up to 32 ft.	52 00
Timber in lengths over 32 feet subject to negotiation.	
Fir flooring, 1 x 3, edge grain..	43 50
Fir flooring, 1 x 4, edge grain..	46 50
Fir flooring, 1 x 4, flat grain..	39 50
No. 1 and 2, 1-in. clear Fir rough	50 75
No. 1 and 2, 1¼ and 1½ in., clear Fir rough	56 00
No. 1 and 2, 2-in. clear Fir rough	52 00
1½-in. No. 1, 4-ft. pine lath.	6 00
1½-in. No. 2 4-ft. lath	5 70
1½-in. 32-in. pine	2 75
1½-in. No. 1 4-ft. hemlock lath.	4 50
1½-in. mill run hemlock lath.	4 25
XX B. C. cedar shingles	3 10
XXX 6 butts to 2-in.	4 00
XXXXX	4 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2 in.		79 00
Ash, white, No. 1 common ...		55 00
Ash, brown, 1sts and 2nds, 4/4		60 00
Ash, brown, com. and bet. ...		48 00
Ash, brown, 1sts and 2nds, 6/4 and 8/4		68 00
Birch, 1st and 2nds, 4/4		58 00
Birch, No. 1 com. and bet., 4/4		47 00
Bich, 1st and 2nds, 6/4 and 8/4		64 00
Birch, 1st & 2nds, 10/4 and 12/4		74 00
Birch, 1st and 2nds, 16/4		82 00
Basswood, 1sts and 2nds, 4/4 ..		51 00
Basswood, No. 1 com. and bet., 4/4	45 00	47 00
Basswood, No. 2 and 3 common		28 00
Basswood, 6/4 and 8/4, 1sts and 2nds	58 00	60 00
Basswood, 6/4 and 8/4, com. and bet.		53 00
Basswood, 4/4, No. 2 com. and bet.		42 00
Soft elm, 1sts and 2nds, 4/4 ..		47 00
Soft Elm, No. 1 com. and bet., 4/4		43 00
Soft Elm, No. 2 and 3 common		24 00
Soft Elm, 6/4 and 8/4, 1 and 2		61 00
Rock Elm, 1sts and 2nds, 6/4 and 8/4		65 00
Rock Elm, No. 2 com. and bet., 6/4 and 8/4		45 00
Soft Maple, 1sts and 2nds, 4/4..		48 00
Soft Maple, com. and bet., 4/4.		38 00
Soft Maple, 6/4 and 8/4, 1sts and 2nds		55 00
Hard Maple, 1sts and 2nds, 4/4		51 00
Hard Maple, com. and bet., 4/4		43 00
Hard Maple, 12/4, 1sts and 2nds	65 00	72 00
Hard Maple, 16/4, 1sts and 2nds	82 00	85 00
Red Oak, plain, 1sts and 2nds, 4/4		62 00
Red Oak, plain, No. 1 com., 4/4		42 00
Red Oak, plain, No. 2 com., 4/4		32 00
Red Oak, plain, 1sts and 2nds, 6/4 and 8/4		75 00
Red Oak, plain, 1sts and 2nds. 12/4 and 16/4	89 00	96 00
White Oak, plain, 1sts and 2nds, 4/4		62 00
White Oak, plain, No. 1 com., 4/4		42 00
White Oak, plain, No. 2 com., 4/4		32 00
Red and White Oak, plain, 1sts and 2nds, 5/4 and 6/4	69 00	71 00
Red and White Oak, plain, No. 1 com., 5/4 and 6/4		46 00
Red and White Oak, plain, No. 2 com., 5/4 and 6/4		35 00
Red and White Oak, plain, 1sts and 2nds, 8/4		76 00
Red and White Oak, plain, No. 1 com., 8/4		52 00
White Oak, plain, 1sts and 2nds, 12/4 and 16/4	89 00	96 00
White Oak, ¼ cut, 1sts and 2nds, 4/4		88 00
White Oak, ¼ cut, 5/4 and 6/4 1sts and 2nds		91 00
White Oak, ¼ cut, No. 1 com.		57 00
Hickory, 1sts and 2nds, 4/4 ...		70 00
Hickory, 6/4, 1sts and 2nds..		77 00
Hickory, 8/4, 1sts and 2nds ..		84 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$60 00	70 00
1¼-in. and 1½-in. x 8-in. & up	70 00	75 00
2-in. x 7-in, and up	72 00	76 00
No. 2 cuts 2 x 8-in. and up ..	45 00	50 00
Pine good strips:		
1-in.	45 00	48 00
1¼-in. and 1½-in.	55 00	56 00
2-in.	56 00	57 00
Pine good shorts:		
1-in. x 7-in. and up	45 00	50 00
1-in. x 4-in. to 6-in.		38 00
1¼-in. and 1½-in.	53 00	55 00
2-in.	54 00	56 00
7-in. to 9-in. A sidings	30 00	34 00
Pine, No. 1 dressing sidings ...	42 00	47 00
Pine, No. 1 dressing strips ...	40 00	43 00
Pine, No. 1 dressing shorts ...		36 00
Pine, 1-in. x 4-in. s.c. strips....	34 00	36 00
Pine, 1-in. x 5-in. s.c. strips ...		38 00
Pine, 1-in. x 6-in. s.c. strips....		40 00
Pine, 1-in. x 7-in. s.c. strips ...		40 00
Pine, 1 x 8-in. s.c., 12 to 16 ft.	40 00	41 00
Pine, 1-in. x 10-in. M.R.		44 00
Pine, s.c. sidings, 1½ and 2-in.		42 00
Pine, s.c. strips 1-in.		37 00
1¼, 1½ and 2-in.		38 00
Pine, s.c. shorts, 1 x 4 to 6 in.		32 00
Pine, s.c. and bet., shorts 1 x 5		33 00
Pine, s.c. and bet. shorts, 1 x 6		35 00
Pine, s.c. shorts, 6′-11′, 1″x 10″		37 00
Pine box boards:		
1″x 4″ and up, 6′-11′		28 00
1″x 3″, 12′-16′		28 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up		32 00
and up, 6-ft. to 11-ft.	24 00	26 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.		25 00
O. culls r & w p	18 00	20 00
Red Pine, log run:		
mill culls out, 1-in.	28 00	30 00
mill culls out, 1¼-in.	32 00	33 00
mill culls out, 1½-in.	32 00	33 00
mill culls out, 2-in.	34 00	36 00
mill culls, white pine, 1″x 7″ and up		33 00
Mill run Spruce:		
1″x 4″ and up, 6′-11′	27 00	28 00
1″x 4″ and up, 12′-16′		31 00
1″x 9″-10″ and up, 12′-16′	36 00	38 00
1¼″x 7″ 8-9″ and up, 12′-16′		37 00
1¼″x 10″ and up, 12′-16′ ...		40 00
1½″ & 2″x12″ and up, 12′-16′		40 00
Spruce, 1-in. clear (fine dressing and B)		42 00
Hemlock, 1-in. cull	16 00	18 00
Hemlock, 1-in. log run	23 00	24 00
Hemlock, 2x4, 6, 8, 10, 12/16′ ..	26 00	28 00
Tamarac	24 00	26 00
Basswood, log run, dead culls out	30 00	40 00
Basswood, log run, mill culls out	26 00	28 00
Birch, log run	30 00	32 00
Soft Elm, common and better, 1, 1½, 2-in.	25 00	30 00
Ash, black, log run	32 00	40 00
1 x 10 No. 1 barn	40 00	45 00
1 x 10 No. 2 barn	38 00	40 00
1 x 8 and 9 No. 2 barn		38 00
Lath per M:		
No. 1 white pine, 1½-in. x 4-ft.	5 25	5 50
No. 2 white pine		5 00
Mill run white pine		5 25
Spruce, mill run 1½-in.		4 50
Red pine, mill run		4 75
Hemlock, mill run		4 00
32-in. lath	2 00	2 25
White Cedar Shingles:		
xxxx, 18-in.		5 00
Clear butt, 18-in.		4 00
18-in. xx		2 75
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

Cts. Per Cubic Foot

White Pine		
First class Ottawa waney, 18-in. average, according to lineal.	80	90
19 in. and up average	85	95
Spruce Deals		
3 in. unsorted, Quebec, 7 in. to 6 in. thick, per M. ft.	22 00	25 00
3 in. unsorted, Quebec, 4 in. to 8 in. thick, per M. ft.	26 00	28 00
3 in. unsorted, Quebec, 9 in. thick, per M. ft.	30 00	35 00
Oak		
According to average and quality 55 ft. cube	78	85
Elm		
According to average and quality, 40 to 45 feet, cube	85	95
According to average and quality, 30 to 35 feet	55	65
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, average	22	25
15 inch, average	26	28
16 inch, average	30	35
18 inch, average	35	40
Birch Planks		
1 to 4 in. thick, per M. ft.	25 00	30 00

SARNIA, ONT.

Fine, Common and Better		
1 x 6 and 8 in.		$74 00
1 in., 8 in. and up wide		83 00
1¼ and 1½ in. and up wide		86 00
2 in. and up wide		88 00
Cuts and Better		
4/4 x 8 and up No. 1 and better		58 00
6/4 x 8 and up No. 1 and better		72 00
8/4 x 8 and up No. 1 and better		74 00
6/4 x 6 and up No. 2 and better		61 00
8/4 x 6 and up No. 2 and better		63 00
6/4 x 6 and up No. 3 and better		55 00
8/4 x 6 and up No. 3 and better		59 00
No. 1 Cuts		
1 in., 8 in. and up wide		50 00
1¼ in., 8 in. and up wide		60 00
1½ in., 8 in. and up wide		61 00
2 in., 8 in. and up wide		65 00
2½ and 3, 8 in. and up wide		84 00
4 in., 8 in. and up wide		90 00
No. 2 Cuts		
1 in., 6 in. and up wide		38 00
1¼ in., 6 in. and up wide		51 00
1½ in., 6 in. and up wide		52 00
2 in., 6 in. and up wide		55 00
2½, 3 and 4 in., 6-in. and up wide..		70 00
No. 3 Cuts		
1 in., 6 in. and up wide		33 00
1¼ and 1½ in., 6-in. and up wide		38 00
2 in., 6 in. and up wide		39 00
2½, 3 and 4-in., 6-in. and up wide	45 00	48 00
Common and Dressing Mill Run		
1-in. x 4-in.		36 00
1-in. x 5-in.		37 00
1-in. x 6 in.		39 00
1-in. x 8-in.		40 00
1-in. x 10-in.		41 00
1-in. x 12-in.		47 00
1-in. x 13-in. and up		47 00
1¼, 1½ and 2 in.		47 00
No. 1 Barn		
1 inch	40 00	52 00
1¼, 1½ and 2-in.	50 00	54 00
2½ and 3-in.		60 00
4 inch		62 00
No. 2 Barn		
1 inch	40 00	45 00
1¼, 1½ and 2-in.	43 00	48 00
2½ and 3-in.		50 00
No. 3 Barn		
1 inch	36 00	42 00
No. 1, 1, 1¼, 1½, 2-in.		43 00
Box		
No. 1, 1, 1¼, 1½, 2-in.	32 00	35 00
No. 2, 1¼, 1½, 2-in.		29 00
Mill Culls		
Mill run culls, 1-in.		29 00
1, 1¼, 1½ and 2-in.		30 00
No. 2	27 00	29 00
Lath		
No. 1, 32-in. pine		2 15
No. 2, 48-in. pine		5 25
No. 1, 48-in. pine		5 75
No. 3, 48-in. pine		4 75
Hemlock Lath, 48-in.		4 75

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac.

Dimension. S. 1 S. and 1 E.

	6 ft.	8 ft.	10 ft.	14 & 16 ft.
2 x 4, 6, 8 ..	16 00	19 00	22 50	23 50
2 x 10	20 00	20 50	23 50	24 50
2 x 12	20 00	21 00	25 50	25 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH.

Mountain Stock.

Dimension.	
2 x 4, 8, 12, 14, 16	23 50
2 x 4, 10, 18, 20	25 50
2 x 6, 8 to 16	23 50
2 x 8, 8 to 16	23 50
2 x 4-6 and 8 in.; 24, 26, 28, 30, 32 ft.	31 50
2 x 10 and 2 x 12; 8-16 ft.	28 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	30 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	32 50
No. 1 Common Boards.	
4 inch	23 00
6 inch	25 50
8, 10, 12 inch	27 50
Mixed widths	26 50
Flooring.	
4 or 6 inch No. 1	37 00
4 or 6 inch No. 2	32 00
4 or 6 inch No. 3	26 00
Shiplap—Finished.	
6 inch	24 00
8, 10 and 12 inch	25 00
Siding.	
6 inch No. 1	37 00
6 inch No. 2	35 00
6 inch No. 3	27 00
Lath.	
No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50

PINE ROUGH TIMBER.

3 x 6 in.; 8 to 16 ft.	29 10
3 x 8 in.; 8 to 16 ft.	26 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	29 00
4 x 10 to 10 x 10, 8 x 8, 6x 12 in. up to 32 ft.	31 00

BRITISH COLUMBIA COAST FIR.

Dimension S1S and E.	
2 x 4 in.; 6 and 8 ft.	27 00
2 x 4 in.; 12 and 14 ft.	28 00
2 x 4 in.; 10 and 16 ft.	29 00
2 x 4 in.; 18 and 24 ft.	30 00
2 x 4 in.; 22 and 24 ft.	31 00
2 x 4 in.; 26 to 32 ft.	33 00
2 x 10 in.; 10 to 16 ft.	29 00
2 x 10 in.; 18 and 20 ft.	31 00
2 x 10 in.; 22 and 24 ft.	32 00
2 x 10 in.; 26 to 32 ft.	34 00
2 x 14 in.; 10 to 16 ft.	34 00
2 x 14 in.; 18 and 20 ft.	36 00
2 x 14 in.; 22 and 24 ft.	37 00
2 x 14 in.; 26 to 32 ft.	39 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	30 00
3 x 3 and 3 x 4 in.; 16 ft.	31 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	32 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	33 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	35 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	33 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	33 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	34 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	34 50
FLOORING.	
Nos. 1 and 2, 1 x 3 in., E. G.	42 00
Nos. 1 and 2, 1 x 4 in., E. G.	45 00
Nos. 1 and 2, 1 x 6 in., E. G.	42 00
Nos. 1 and 2, 1 x 4 in., F. G.	35 00
Nos. 1 and 2, 1 x 6 in., F. G.	40 00
No. 3, 1 x 4 in.	33 00
No. 3, 1 x 6 in.	38 00
SHIPLAP.	
B. C. fir, 6 in.	28 00
B. C. fir, 8, 10, 12 in.; 8 to 16 ft.	29 00
No. 2 shiplap, 6 in.	22 00
No. 2 shiplap, 8, 10 and 12 in.	24 50
FIR, COMMON BOARDS, S1S, 8 to 16 Ft	
Mixed widths (may contain 30 per cent. 4 and 6 in.)	28 00
Common boards, 8 to 12 in.	29 00
No. 2 mixed widths	24 00
No. 2 boards, 8 to 12 in.	25 50
SHINGLES.	
XXX B. C. cedar	3 35
LATH.	
Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's	4 50
Cedar lath, ⅜ x 1⅜ in. x 4 ft.	5 25

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers, 4/4	$115 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	130 00
Selects 4/4	110 00
Selects 5/4 to 8/4	110 00
Selects 10/4 to 12/4	120 00
Fine common 4/4	80 00
Fine common 5/4	85 00
Fine common 6/4	82 00
Fine common 8/4	85 00
No. 1 Cuts 4/4	63 00
No. 1 Cuts 5/4	72 00
No. 1 Cuts 6/4	73 00
No. 1 Cuts 8/4	76 00
No. 2 Cuts 4/4	45 00
No. 2 Cuts 5/4	59 00
No. 2 Cuts 6/4	60 00
No. 2 Cuts 8/4	67 00
No. 3 Cuts 5/4	47 00
No. 3 Cuts 6/4	47 00
No. 3 Cuts 8/4	48 00
Dressing 5/4	62 00
Dressing 5/4 x 10	65 00
Dressing 5/4 x 12	70 00
No. 1 Moulding 5/4	72 00
No. 1 Moulding 6/4	72 00
No. 1 Moulding 8/4	72 00
No. 2 Moulding 5/4	64 00
No. 2 Moulding 6/4	64 00
No. 2 Moulding 8/4	64 00
No. 1 Barn 1 x 12	61 00
No. 1 Barn 1 x 6 and 8	52 00
No. 1 Barn 1 x 10	54 00
No. 2 Barn 1 x 6 and 8	48 00
No. 2 Barn 1 x 10	52 00
No. 3 Barn 1 x 6 and 8	45 00
No. 3 Barn 1 x 10	43 00
Box 1 x 6 and up	43 00
Box 1 x 10	43 00
Box 1 x 12	44 00
Box 1 x 13 and up	45 00

(Continued on page 58)

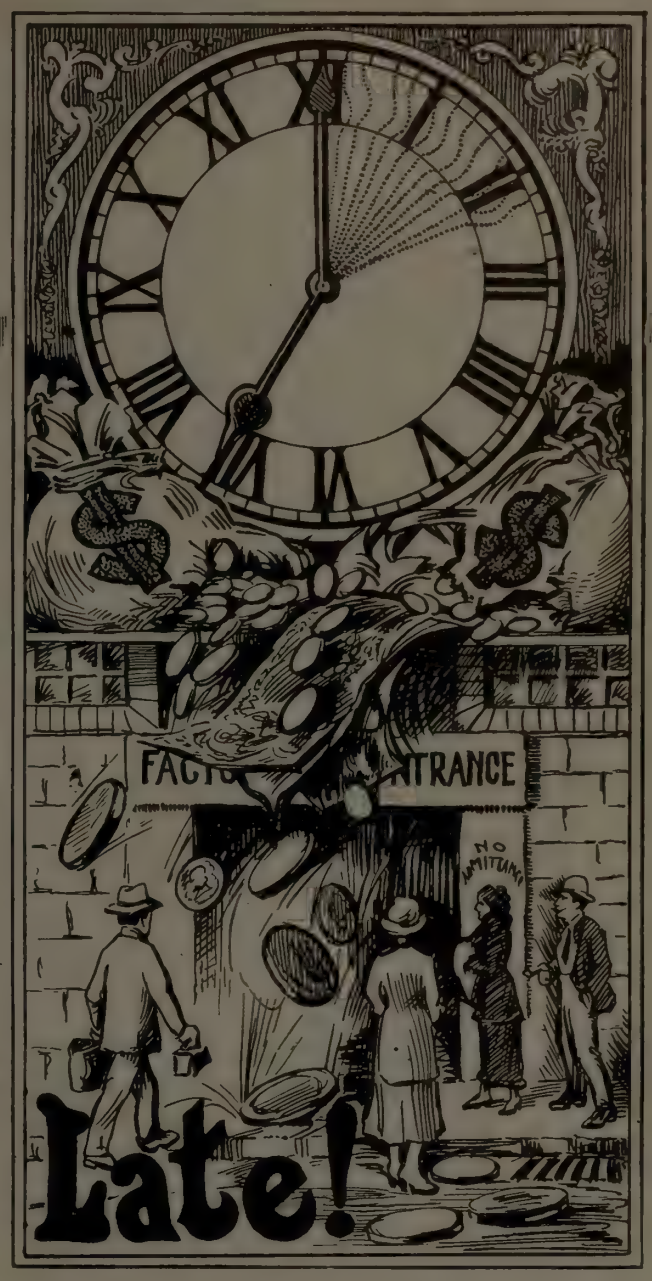
You Pay For an Hour —You get 50 minutes And Less

You might as well throw your profits in the street

Time is a commodity—it is an article of commerce—you pay the full price for it and yet you have no record of value received.

For instance—without a time recorder your employees are dilatory—five minutes here or there will never be noticed—a hundred have the same idea. What does it cost you?

Again—you not only pay for their lost time, but also the time your expensive equipment is standing idle. Your overhead expenses are the same, regardless of this inefficiency.



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CURRENT LUMBER PRICES — Continued

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda.

MAPLE	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	43 - 45	25 - 27	15 - 17
5/4 to 8/4	55 - 57	33 - 35	17 - 21
10/4 to 16/4	65 - 67	45 - 47	25 - 27
RED BIRCH			
4/4	58 - 60	38 - 40	22 - 24
5/4 to 8/4	60 - 62	40 - 42	24 - 26
SAP BIRCH			
4/4	53 - 55	32 - 34	20 - 22
5/4 and up	55 - 57	34 - 36	22 - 24
SOFT ELM			
4/4	43 - 45	28 - 30	20 - 22
5, 6 & 8/4	45 - 47	30 - 32	20 - 22
BASSWOOD			
4/4	44 - 46	34 - 36	22 - 24
Thicker	42 - 44	32 - 34	22 - 24
PLAIN OAK			
4/4	55 - 57	33 - 35	19 - 21
5/4 to 8/4	56 - 58	29 - 31	17 - 19
ASH, WHITE AND BROWN			
4/4	55 - 57	29 - 31	19 - 21
5/4 to 8/4	65 - 67	34 - 36	20 - 22
10/4 and up	74 - 87	46 - 48	22 - 24

BOSTON, MASS.

Quotations given below are for highest grades of Michigan and Canadian white pine as required in the New England market.

White pine uppers, 1 to 2 in.		119 00
White pine uppers, 2½ and 3 in.		134 00
White pine uppers, 4 in.		144 00
Selects, 1 to 2 in.	106 00	109 00
Selects, 2½ and 3 in.		124 00
Selects, 4 in.		134 00
Fine common, 1 in., 30 per cent. 12 in. and up		78 00
Fine common, 1 x 8 to 11 in.		75 00
Fine common, 1¼ to 2 in.	85 00	87 00
Fine common, 2½ and 3 in.		115 00
1 in. shaky clear		57 00
1¼ to 2 in. shaky clear		60 00
1 in. No. 2 dressing		50 00
1¼ to 2 in. No. 2 dressing		56 00
No. 1 Cuts, 1 in.		60 00
No. 1 Cuts, 1¼ to 2 in.	70 00	75 00
No. 1 Cuts, 2½ and 3 in.		100 00
No. 2 Cuts, 1 in.		49 00
No. 2 Cuts, 1¼ to 2 in.	60 00	66 00
Barn Boards, No. 1, 1 x 12		55 00
No. 1, 1 x 10		52 00
No. 1, 1 x 8		49 00
No. 2, 1 x 12		50 00
No. 2, 1 x 10		50 00
No. 2, 1 x 8		49 00
No. 3, 1 x 12		48 00
No. 3, 1 x 10		47 00
No. 3, 1 x 8		46 00
Canadian spruce boards		36 00
Spruce, 12 in. dimension		46 00
Spruce, 10 in. dimension		44 00
Spruce, 9 in. dimension		43 00
Spruce, 8 in. under dimen.		40 00
10 and 12 in. random lengths, 8 ft. and up	42 00	43 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7,		34 00
3 x 4 and 4 x 4 in.		38 00
2 x 8 in.		39 00
All other random lengths, 7-in. and under, 8 ft. and up		34 00
5-inch and up merchantable boards, 8 ft. and up, p 1s		33 00
1 x 2		30 00
1 x 3		29 00
1⅝-in. spruce lath		4 60
1½ in. spruce lath		4 25

New Brunswick Cedar Shingles

Extras		4 50
Clears		4 15
Second Clears	3 25	3 50
Clear whites	2 50	2 75
Extra 1s (Clear whites in)	1 75	2 25
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Red Cedar Extras, 16-in. 5 butts to 2 in.	4 73	4 98
Red Cedar Eurekas, 18 inch 5 butts to 2 in.		5 40
Red Cedar Perfections, 5 butts to 2¼		6 07
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Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

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THE Honorary Advisory Council of Scientific and Industrial Research appointed by the Dominion Government to ascertain what steps can be taken to prevent the existing waste, and to promote the conservation of natural resources, has brought to light some startling facts during its sitting in British Columbia. The enquiry dealt especially with lumber production and by-products. The president of a big lumber company said that "in handling trees for ordinary timber purposes, fully half the bulk was left behind, and 20 per cent. was lost by sawing boards alone." There is no reason why this "waste" should not be fully utilized and turned into a money-making account.

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We have a wide experience in the design and construction of complete plants for the economical using of waste woods.

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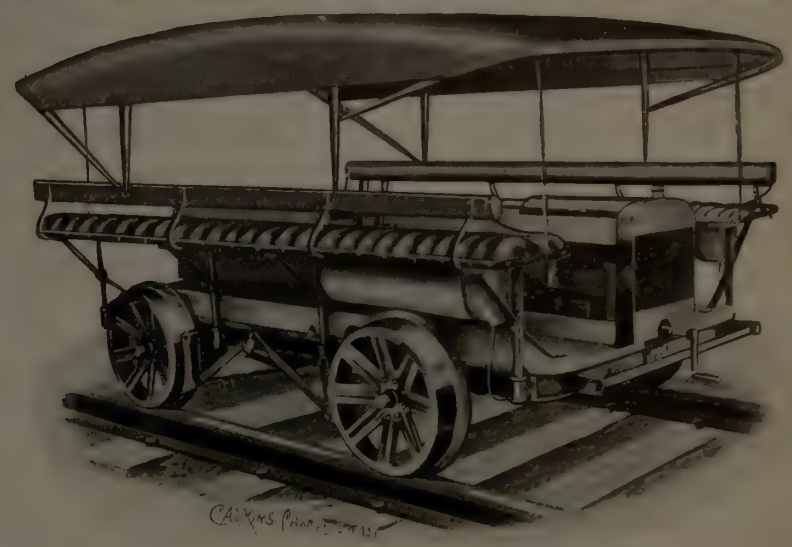

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We recommend this car highly for lumber companies operating a short line railway, as it is an ideal car for light passenger service, or tractor for hauling supplies, moving crews, etc. Frame is of 3 x $1\frac{3}{8}$ x $\frac{5}{16}$ channel steel; axles $1\frac{11}{16}$ inches with Hyatt roller bearings; 20 inch pressed steel wheels of extra strength. Four cylinder, four cycle, water cooled, 10-12 h. p. engine, equipped with Atwater-Kent ignition system, float feed carburetor with throttle and spark control, and kerosene attachment. We also equip the car with friction drive as it gives a variation of speed and power. Reverses by shifting friction wheel over center on the disc, and runs in either direction equally as well. Seats are nicely upholstered, with lazy backs; folding top with jiffy side and end curtains. The car is a complete job that will cut operating expenses in quarter.

Price Complete $600.00 F.O.B. Factory.—If interested write us for complete descriptive matter or place order direct from this ad. 4L

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Canada's Banner Province

Ontario's timber production last year valued at $26,774,937 or 40% of Canada's total output.

Pine production, 905,442,000 ft. B.M.
Pulpwood, 246,282 cords.
Railway Ties, 5,704,459.

Ontario's woodworking industries, using 34 different kinds of wood, provide a ready market for the lumberman. Eighty-two per cent. of lumber used in Ontario's industries purchased within the Province.

Ontario's vast resources offer unsurpassed opportunities to the lumberman.

For maps and full information regarding Ontario, apply to

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(Continued on page 62)

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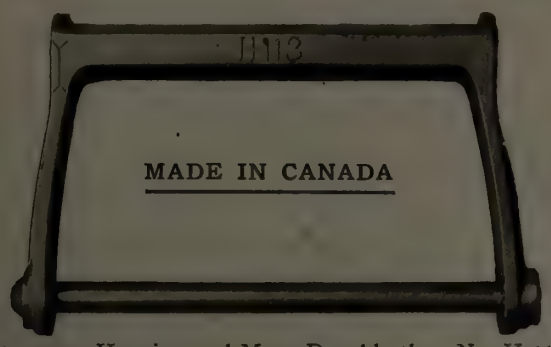

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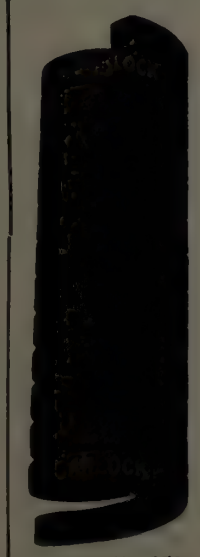

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(Continued on page 64)

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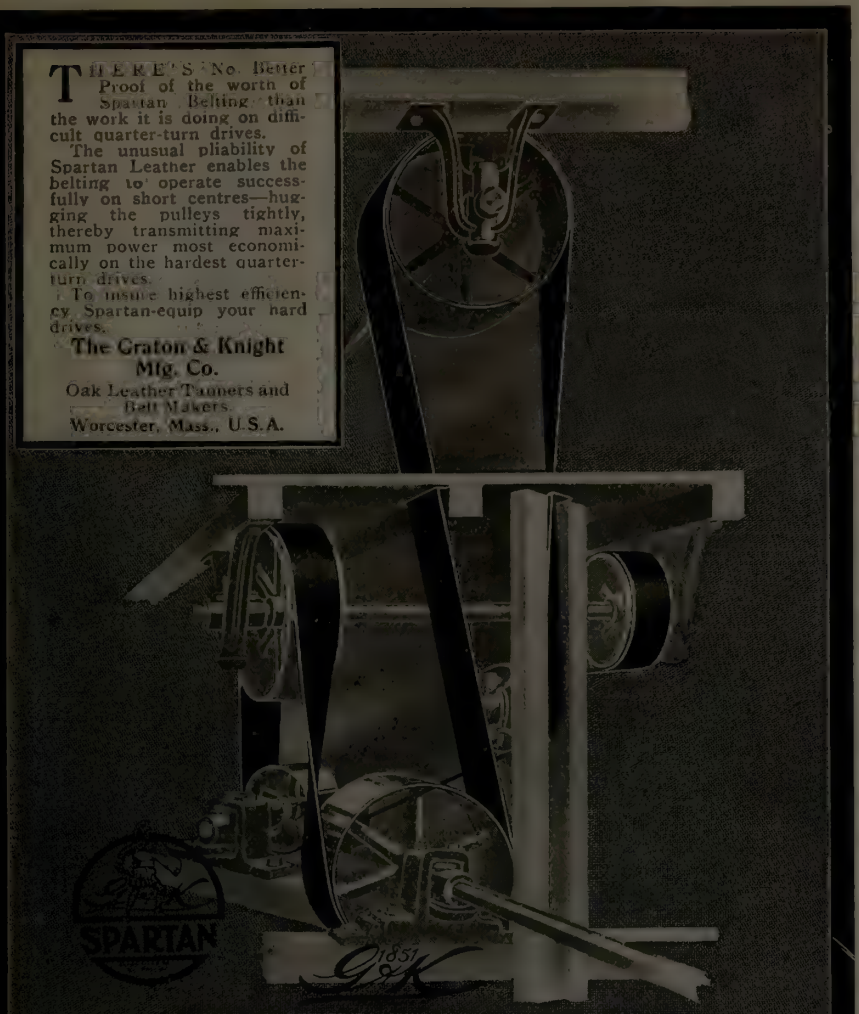

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is about 3⅓ CENTS PER DAY after installing a

National Boiler Seam Protector

Which is Guaranteed for 2 years

With National Boiler Seam Protectors Fire Cracks, Mud Cracks, Leaks cannot occur.

If your Boiler is Leaky, after caulking up, she will always remain dry thereafter.

Your Boiler is protected under all conditions of temperature.

This protection is past the experimental stage, and is in use by the leading firms in the United States and Canada, a few of names as under:

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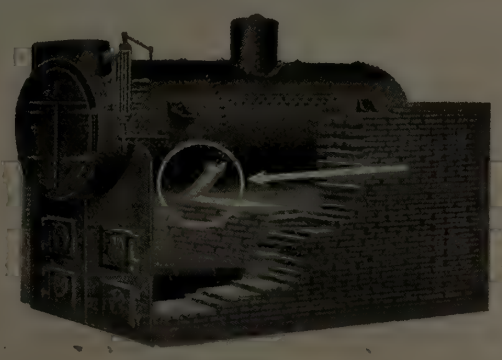
There are hundreds of other firms who realize Protection is the biggest money-saver.



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Without the National Boiler Seam Protector no boiler maker will guarantee a boiler from fire cracking.

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Now it is up to you.

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Donogh & Company, John
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Hart & McDonagh
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Hillas & Company, W. N.
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Dept. of Lands and Forests
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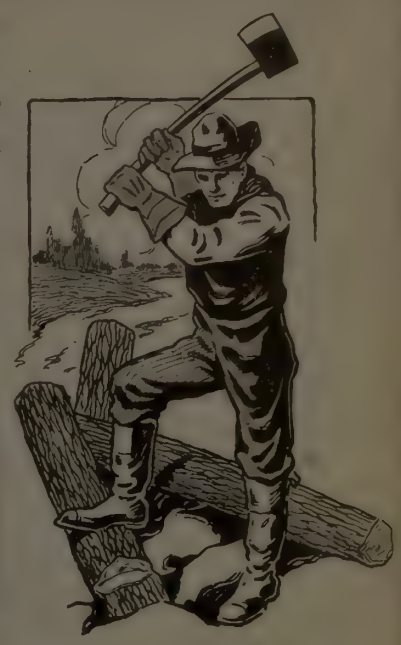

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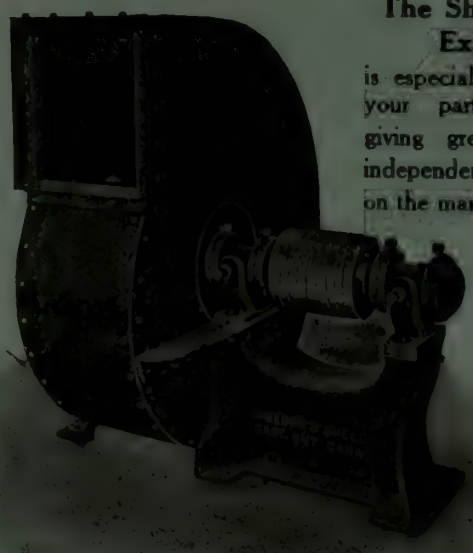

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